

Testing and further development of RIVPACS

Appendices

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Appendix A The location and sampling dates of the 438 sites used in the development of RIVPACS II. (Note that the 28 sites indicated with an asterisk were removed from the data-set prior to all analyses undertaken in Chapter 4 of the main report. See page 82 of main report for further details).

River	Site	NGR	Spring	Summer	Autumn
R.Camel	Pencarrow Bridge	SX 104 827	23-May-78	16-Aug-78	01-Nov-78
R.Camel	Tuckingham	SX 088 778	23-May-78	16-Aug-78	01-Nov-78
R.Camel	Helland Bridge	SX 065 715	23-May-78	16-Aug-78	01-Nov-78
R.Camel	Brocton	SX 015 685	23-May-78	16-Aug-78	01-Nov-78
R.Axe	Mosterton(1)	ST 457 053	11-Apr-78	15-Aug-78	31-Oct-78
R.Axe	Oathill Farm(1)	ST 402 060	11-Apr-78	15-Aug-78	31-Oct-78
R.Axe	Broom(1)	ST 326 025	11-Apr-78	16-Aug-78	30-Oct-78
R.Axe	Whitford Bridge(1)	SY 262 953	11-Apr-78	16-Aug-78	30-Oct-78
R.Exe	Warren Farm	SS 791 407	25-May-78	22-Aug-78	02-Nov-78
R.Exe	Exford	SS 853 383	25-May-78	22-Aug-78	02-Nov-78
R.Exe	Edbrooke	SS 912 342	25-May-78	22-Aug-78	02-Nov-78
R.Exe	Exebridge	SS 930 245	25-May-78	22-Aug-78	02-Nov-78
R.Exe	Lythecourt	SS 948 153	25-May-78	24-Aug-78	07-Nov-78
R.Exe	Bramford Speke	SX 929 984	25-May-78	24-Aug-78	07-Nov-78
R.Torridge	Fordmill Farm	SS 324 178	31-May-78	09-Aug-78	03-Nov-78
R.Torridge	Woodford Bridge	SS 399 126	31-May-78	09-Aug-78	03-Nov-78
R.Torridge	Kingsley Mill	SS 470 061	31-May-78	09-Aug-78	03-Nov-78
R.Torridge	Hele Bridge	SS 542 064	02-Jun-78	10-Aug-78	03-Nov-78
R.Torridge	Beaford Bridge	SS 543 143	02-Jun-78	10-Aug-78	10-Nov-78
R.Torridge	Gt Torrington Town Mills	SS 499 185	02-Jun-78	10-Aug-78	10-Nov-78
R.Avill	Wheddon Cross	SS 925 395	27-Apr-78	23-Jul-79	30-Oct-78
R.Avill	Timberscombe	SS 960 430	27-Apr-78	23-Jul-79	30-Oct-78
R.Avill	Dunster	SS 984 432	27-Apr-78	23-Jul-79	30-Oct-78
Western Avon	Patney	SU 071 585	23-Apr-79	15-Jun-78	24-Oct-78
Western Avon	Rushall	SU 132 558	23-Apr-79	15-Jun-78	24-Oct-78
R.Avon(Hants)	Bulford	SU 163 437	23-Apr-79	15-Jun-78	24-Oct-78
R.Avon(Hants)	Stratford-sub-Castle	SU 129 330	23-Apr-79	15-Jun-78	24-Oct-78
R.Avon(Hants)	Breamore	SU 163 174	23-Apr-79	12-Jun-78	24-Oct-78
R.Avon(Hants)	Moortown	SU 149 035	29-Apr-79	17-Jul-79	09-Oct-79
R.Avon(Hants)	Christchurch	SZ 158 933	29-Apr-79	12-Jun-79	15-Nov-79
Sherston Avon	Easton Grey	ST 880 873	23-May-78	18-Jul-78	17-Oct-78
Tetbury Avon	Brockenborough	ST 915 893	23-May-78	18-Jul-78	17-Oct-78
Bristol Avon	Cow Bridge	ST 943 862	23-May-78	18-Jul-78	18-Oct-78
Bristol Avon	Great Somerford	ST 965 831	23-May-78	18-Jul-78	18-Oct-78
Bristol Avon	Kellaway's Weir	ST 947 758	23-May-78	19-Jul-79	20-Sep-79
Bristol Avon	Lacock	ST 922 681	23-May-78	18-Jul-78	18-Oct-78
Bristol Avon	Staverton Weir	ST 856 609	30-Apr-79	12-Jul-79	20-Sep-79
Bristol Avon	Saltford	ST 689 677	30-Apr-79	12-Jul-79	20-Sep-79
Avonwater	Wooton Bridge(1)	SZ 250 996	09-May-78	23-Aug-78	16-Nov-78
Avonwater	Gordleton Mill(1)	SZ 292 961	09-May-78	23-Aug-78	16-Nov-78
Avonwater	Efford Bridge(1)	SZ 307 941	09-May-78	23-Aug-78	16-Nov-78

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
Candover Brook	Abbotstone	SU 565 345	16-May-78	22-Aug-78	20-Nov-78
R.Itchen	Chilland	SU 523 325	16-May-78	22-Aug-78	20-Nov-78
R.Itchen	Itchen St. Cross	SU 481 282	16-May-78	22-Aug-78	20-Nov-78
R.Itchen	Otterbourne Water Works	SU 470 233	16-May-78	22-Aug-78	20-Nov-78
R.Itchen	D/S Chickenhall SDW	SU 466 175	16-May-78	22-Aug-78	23-Nov-78
R.Rother(Sussex)	U/S Liss STW	SU 773 273	02-Jun-78	22-Aug-78	08-Nov-78
R.Rother(Sussex)	Stodham Park	SU 769 260	02-Jun-78	22-Aug-78	08-Nov-78
R.Rother(Sussex)	Durford Bridge	SU 783 234	30-May-78	25-Sep-78	08-Nov-78
R.Rother(Sussex)	Stedham	SU 863 226	26-May-78	09-Aug-78	08-Nov-78
R.Rother(Sussex)	Selham	SU 935 213	26-May-78	09-Aug-78	08-Nov-78
R.Rother(Sussex)	Hardham	TQ 034 178	26-May-78	09-Aug-78	13-Nov-78
R.Arun	Magpie Bridge	TQ 187 292	23-May-78	10-Aug-78	06-Nov-78
*R.Arun	Gibbon's Mill	TQ 072 307	23-May-78	10-Aug-78	06-Nov-78
R.Arun	Pallingham	TQ 046 229	23-May-78	09-Aug-78	06-Nov-78
R.Dudwell	Burwash Weald	TQ 655 224	01-Jun-78	23-Aug-78	07-Nov-78
R.Brede	Sedlescombe Street	TQ 783 177	02-Jun-78	01-Sep-78	07-Nov-78
R.Rother(Kent)	Etchingham	TQ 720 262	01-Jun-78	23-Aug-78	07-Nov-78
R.Rother(Kent)	Udiam	TQ 771 243	02-Jun-78	01-Sep-78	07-Nov-78
R.Rother(Kent)	D/S Newenden	TQ 850 270	31-May-78	29-Aug-78	06-Nov-78
R.Evenlode	Moreton-in-the-Marsh	SP 202 312	12-May-78	12-Sep-78	31-Oct-79
R.Evenlode	Evenlode	SP 220 281	12-May-78	12-Sep-78	31-Oct-79
R.Evenlode	Lyneham	SP 274 197	12-May-78	12-Sep-78	01-Nov-79
R.Evenlode	Fawler	SP 366 173	15-May-78	14-Sep-78	01-Nov-79
R.Evenlode	Cassington	SP 448 102	15-May-78	14-Sep-78	01-Nov-79
R.Tillingbourne	Wotton	TQ 130 470	19-May-78	08-Sep-78	08-Nov-79
R.Tillingbourne	U/S Albury Village	TQ 053 479	19-May-78	08-Sep-78	08-Nov-79
R.Wey	Wyck	SU 756 417	23-May-78	04-Sep-78	13-Nov-79
R.Wey	Tilford	SU 873 437	23-May-78	04-Sep-78	13-Nov-79
R.Wey	Eashing	SU 947 438	23-May-78	04-Sep-78	13-Nov-79
R.Wey	Burpham	TQ 005 532	24-May-78	06-Sep-78	22-Nov-79
R.Wey	Byfleet	TQ 070 613	24-May-78	06-Sep-78	22-Nov-79
R.Mimram	Whitwell	TL 193 207	08-May-79	27-Jul-78	20-Nov-78
R.Mimram	Codicote Bottom	TL 208 180	08-May-79	27-Jul-78	20-Nov-78
R.Mimram	Panshanger	TL 282 134	10-May-79	04-Aug-78	20-Nov-78
R.Lee	Ware Weir	TL 365 143	08-May-79	04-Aug-78	20-Nov-78
R.Lee	Meadgate	TL 384 076	10-May-79	07-Aug-78	23-Nov-78
R.Lee	Fisher's Green	TL 374 044	10-May-79	07-Aug-78	23-Nov-78
R.Lee	Enfield Weir	TQ 374 983	08-May-79	04-Aug-78	23-Nov-78
Gwendraeth Fach	Garn-Lwyd	SN 543 163	11-Apr-78	30-Jun-78	15-Sep-78
Gwendraeth Fach	Llangendeirne	SN 460 139	11-Apr-78	30-Jun-78	15-Sep-78
Gwendraeth Fach	U/S Kidwelly	SN 419 077	11-Apr-78	30-Jun-78	15-Sep-78
R.Teifi(Tyfi)	Strata Florida	SN 749 659	07-Apr-78	26-Jun-78	18-Sep-78
R.Teifi(Tyfi)	Tregaron Bog	SN 684 628	07-Apr-78	26-Jun-78	18-Sep-78
R.Teifi(Tyfi)	Pont Gogoyan	SN 642 547	07-Apr-78	26-Jun-78	18-Sep-78
R.Teifi(Tyfi)	Alltyblacca	SN 523 454	07-Apr-78	27-Jun-78	19-Sep-78
R.Teifi(Tyfi)	Bangor Teifi	SN 373 403	10-Apr-78	27-Jun-78	19-Sep-78
R.Teifi(Tyfi)	Llechryd	SN 217 437	10-Apr-78	27-Jun-78	19-Sep-78

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Clwyd	Melin-y-Wig	SJ 040 488	11-May-78	18-Aug-78	10-Oct-79
R.Clwyd	Nant Clwyd Hall	SJ 109 519	11-May-78	18-Aug-78	10-Oct-79
R.Clwyd	Above Ruthin	SJ 124 571	11-May-78	18-Aug-78	10-Oct-79
R.Clwyd	Glan-y-Wern	SJ 091 658	11-May-78	18-Aug-78	10-Oct-79
R.Clwyd	Pont Llanerch	SJ 060 719	11-May-78	18-Aug-78	10-Oct-79
*R.Leadon	Evesbatch	SO 688 481	31-May-78	17-Aug-78	02-Nov-78
R.Leadon	Uplands	SO 697 404	31-May-78	17-Aug-78	02-Nov-78
*R.Leadon	Greenway	SO 701 332	31-May-78	17-Aug-78	02-Nov-78
R.Leadon	Ketford	SO 730 307	31-May-78	17-Aug-78	02-Nov-78
R.Leadon	Upleadon	SO 770 270	31-May-78	17-Aug-78	02-Nov-78
R.Perry	Perry Farm	SJ 347 302	21-May-79	23-Aug-78	01-Nov-78
R.Perry	Rednal Mill	SJ 374 294	21-May-79	23-Aug-78	01-Nov-78
R.Perry	Wykey	SJ 396 245	21-May-79	23-Aug-78	01-Nov-78
R.Perry	Milford	SJ 422 210	21-May-79	23-Aug-78	01-Nov-78
R.Perry	Mytton	SJ 439 171	21-May-79	23-Aug-78	01-Nov-78
R.Blithe	Cookshill	SJ 942 435	04-May-79	06-Jun-78	27-Oct-78
R.Blithe	Cresswell	SJ 975 393	04-May-79	06-Jun-78	27-Oct-78
R.Blithe	Field	SK 024 334	04-May-79	06-Jun-78	27-Oct-78
R.Blithe	Newton	SK 048 259	04-May-79	06-Jun-78	27-Oct-78
R.Blithe	Hamstall Ridware	SK 109 190	04-May-79	06-Jun-78	27-Oct-78
R.Smite	Colston Bassett	SK 697 333	15-Mar-79	14-Jun-79	12-Sep-78
R.Smite	Thoroton	SK 773 427	15-Mar-79	06-Jun-78	12-Sep-78
R.Devon	Knipton	SK 822 315	15-Mar-79	06-Jun-78	12-Sep-78
R.Devon	Bottesford	SK 812 390	15-Mar-79	06-Jun-78	12-Sep-78
R.Devon	Hawton	SK 785 511	15-Mar-79	14-Jun-79	12-Sep-78
R.Dove	Glutton Bridge	SK 084 665	09-May-78	02-Aug-78	24-Oct-79
R.Dove	Hartington	SK 121 598	09-May-78	02-Aug-78	24-Oct-79
R.Dove	Dovedale	SK 146 504	09-May-78	02-Aug-78	24-Oct-79
R.Dove	U/S Rocester	SK 115 392	09-May-78	07-Aug-78	25-Oct-79
R.Dove	Sudbury	SK 163 312	10-May-78	07-Aug-78	25-Oct-79
R.Dove	Monk's Bridge	SK 268 270	10-May-78	07-Aug-78	25-Oct-79
Stambourne Brook	Great Yeldham	TL 759 384	27-Apr-79	23-Aug-79	17-Oct-78
R.Colne	D/S Hedingham STW	TL 798 323	25-Apr-79	23-Aug-79	17-Oct-78
R.Colne	Earl's Colne	TL 867 289	27-Apr-79	23-Aug-79	18-Oct-78
R.Colne	Fordstreet Bridge	TL 921 272	01-May-79	23-Aug-79	18-Oct-78
R.Colne	Colchester	TL 997 256	01-May-79	23-Aug-79	19-Oct-78
Great Eau	Ruckland	TF 332 779	02-May-79	24-Jul-79	03-Nov-78
Great Eau	Swaby	TF 370 768	02-May-79	24-Jul-79	03-Nov-78
Great Eau	Bellau	TF 403 777	03-May-79	25-Jul-79	03-Nov-78
Great Eau	Withern	TF 425 826	03-May-79	25-Jul-79	03-Nov-78
Great Eau	Theddlethorpe-All-Saints	TF 452 867	08-May-79	26-Jul-79	07-Nov-78
R.Glen	Bitchfield	SK 985 286	15-May-79	20-Aug-79	11-Oct-78
*R.Glen	Corby Glen	SK 990 248	11-May-79	21-Aug-79	11-Oct-78
R.Glen	Little Bytham	TF 019 177	11-May-79	21-Aug-79	11-Oct-78
R.Glen	Banthorpe Lodge	TF 068 112	16-May-79	22-Aug-79	11-Oct-78
R.Glen	South Of Twenty	TF 156 190	16-May-79	22-Aug-79	16-Oct-78
R.Glen	Pinchbeck	TF 235 260	16-May-79	22-Aug-79	16-Oct-78

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Welland	Marston Trussel	SP 697 864	10-May-79	20-Aug-79	23-Oct-78
*R.Welland	Weston Crossing	SP 779 923	11-May-79	20-Aug-79	23-Oct-78
R.Welland	Harringworth	SP 914 976	11-May-79	20-Aug-79	23-Oct-78
R.Welland	Tinwell	TF 007 063	14-May-79	21-Aug-79	25-Oct-78
R.Welland	Crowland	TF 228 106	14-May-79	22-Aug-79	25-Oct-78
R.Wensum	South Raynham	TF 885 240	11-Apr-79	30-Aug-79	05-Oct-78
R.Wensum	South Mill Farm	TF 881 282	11-Apr-79	30-Aug-79	05-Oct-78
R.Wensum	Great Ryburgh	TF 964 273	11-Apr-79	30-Aug-79	05-Oct-78
R.Wensum	Worthing	TG 005 202	11-Apr-79	30-Aug-79	05-Oct-78
R.Wensum	North Of Elsing	TG 052 178	11-Apr-79	30-Aug-79	05-Oct-78
R.Wensum	Taverham	TG 161 137	11-Apr-79	30-Aug-79	05-Oct-78
R.Blackwater	Shipdham	TF 952 068	10-Apr-79	29-Aug-79	06-Oct-78
R.Blackwater	Woodrising	TF 987 039	10-Apr-79	29-Aug-79	06-Oct-78
*R.Yare	Near Hardingham Station	TG 045 058	10-Apr-79	29-Aug-79	06-Oct-78
R.Yare	North Of Barford	TG 108 084	10-Apr-79	29-Aug-79	06-Oct-78
R.Yare	Earlham	TG 190 082	10-Apr-79	29-Aug-79	06-Oct-78
R.Yare	North Of Old Lakenham	TG 236 060	10-Apr-79	29-Aug-79	06-Oct-78
*R.Hodder	Cross Of Greet Bridge	SD 702 590	06-Apr-79	27-Jul-78	10-Oct-78
R.Hodder	Slaiburn	SD 715 524	06-Apr-79	27-Jul-78	10-Oct-78
R.Hodder	D/S Langden Beck	SD 658 479	06-Apr-79	27-Jul-78	10-Oct-78
R.Hodder	Higher Hodder Bridge	SD 697 411	06-Apr-79	27-Jul-78	10-Oct-78
Gayle Beck	Cam End	SD 785 803	06-Apr-79	28-Jul-78	12-Oct-78
R.Ribble	Horton	SD 806 726	06-Apr-79	28-Jul-78	12-Oct-78
R.Ribble	Cleatop Barns	SD 806 614	06-Apr-79	28-Jul-78	12-Oct-78
R.Ribble	Halton Bridge	SD 851 551	06-Apr-79	28-Jul-78	12-Oct-78
R.Ribble	Sawley Bridge	SD 775 466	06-Apr-79	28-Jul-78	12-Oct-78
R.Ribble	Mitton Bridge	SD 715 387	06-Apr-79	28-Jul-78	12-Oct-78
R.Ribble	Ribchester Bridge	SD 662 356	07-Apr-79	28-Jul-78	12-Oct-78
R.Dane	Hug Bridge	SJ 930 636	30-Apr-79	19-Jul-78	18-Oct-78
*R.Dane	Forge Mill	SJ 849 637	30-Apr-79	19-Jul-78	18-Oct-78
*R.Dane	Byley Bridge	SJ 715 674	30-Apr-79	19-Jul-78	18-Oct-78
R.Weaver	Sandford Bridge	SJ 620 470	18-Apr-79	21-Jul-78	20-Oct-78
R.Weaver	Hankelow Mill	SJ 659 451	18-Apr-79	21-Jul-78	20-Oct-78
R.Weaver	Beam Bridge	SJ 651 536	18-Apr-79	21-Jul-78	20-Oct-78
R.Derwent(NWWA)	Grange-in-Borrowdale	NY 255 176	10-May-78	25-Aug-78	01-Nov-78
R.Derwent(NWWA)	High Stock Bridge	NY 243 260	10-May-78	25-Aug-78	01-Nov-78
R.Derwent(NWWA)	Ouse Bridge	NY 200 321	10-May-78	25-Aug-78	01-Nov-78
R.Derwent(NWWA)	Cockermouth	NY 116 307	10-May-78	30-Aug-78	01-Nov-78
R.Derwent(NWWA)	Ribton Hall	NY 046 304	10-May-78	30-Aug-78	01-Nov-78
R.Derwent(NWWA)	Workington	NY 009 293	10-May-78	30-Aug-78	31-Oct-78
R.Ehen	Ennerdale Bridge	NY 068 159	09-May-78	21-Aug-78	31-Oct-78
R.Ehen	U/S Keekle	NY 014 130	09-May-78	21-Aug-78	31-Oct-78
R.Ehen	D/S Keekle	NY 012 125	09-May-78	21-Aug-78	31-Oct-78
R.Ehen	Braystones	NY 007 061	09-May-78	21-Aug-78	31-Oct-78
R.Derwent(YWA)	Langdale End	SE 942 910	07-Apr-78	27-Jun-78	07-Sep-78
R.Derwent(YWA)	West Ayton	SE 988 848	07-Apr-78	27-Jun-78	07-Sep-78
R.Derwent(YWA)	Yedingham	SE 892 795	07-Apr-78	27-Jun-78	06-Sep-78

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Derwent(YWA)	Norton	SE 790 715	07-Apr-78	28-Jun-78	06-Sep-78
R.Derwent(YWA)	Stamford Bridge	SE 710 555	07-Apr-78	27-Jun-78	04-Sep-78
R.Derwent(YWA)	Thorganby	SE 697 424	11-Apr-78	26-Jun-78	04-Sep-78
*R.Esk	Westerdale	NZ 663 062	17-Apr-79	11-Jul-78	08-Sep-78
*R.Esk	Castleton	NZ 685 085	17-Apr-79	11-Jul-78	08-Sep-78
R.Esk	Lealholm	NZ 762 076	07-Apr-78	11-Jul-78	08-Sep-78
R.Esk	Briggswath	NZ 869 082	07-Apr-78	11-Jul-78	08-Sep-78
R.Swale	Keld	NY 885 015	06-Apr-78	12-Jul-78	04-Sep-78
R.Swale	Oxnop	SD 933 978	06-Apr-78	12-Jul-78	04-Sep-78
R.Swale	Grinton	SE 046 985	06-Apr-78	12-Jul-78	04-Sep-78
R.Swale	U/S Richmond	NZ 146 007	06-Apr-78	17-Jul-78	05-Sep-78
R.Swale	Moreton-on-Swale	SE 319 918	11-Apr-78	12-Jul-78	05-Sep-78
R.Swale	Topcliffe	SE 398 759	11-Apr-78	04-Jul-78	05-Sep-78
R.Ure	Aldwark Toll Bridge	SE 467 621	13-Apr-78	30-Jun-78	06-Sep-78
R.Ouse	Nether Poppleton	SE 556 552	13-Apr-78	30-Jun-78	12-Oct-78
R.Ouse	Acaster Malbis	SE 591 455	13-Apr-78	29-Jun-78	12-Oct-78
R.Tees	Moorhouse	NY 762 338	21-Jun-79	23-Aug-78	09-Nov-78
R.Tees	Cauldron Snout	NY 814 288	25-Jun-80	23-Aug-78	09-Nov-78
R.Tees	Dent Bank	NY 931 259	21-Jun-79	23-Aug-78	09-Nov-78
R.Tees	Barnard Castle	NZ 042 172	21-Jun-79	23-Aug-78	09-Nov-78
R.Tees	Gainford	NZ 178 163	21-Jun-79	23-Aug-78	08-Nov-78
R.Tees	Monk End	NZ 288 101	21-Jun-79	23-Aug-78	08-Nov-78
R.Tees	Over Dinsdale	NZ 346 114	21-Jun-79	23-Aug-78	08-Nov-78
South Tyne	Dipper Bridge	NY 758 372	10-May-79	21-Aug-78	22-Nov-78
South Tyne	Alston	NY 717 459	10-May-79	21-Aug-78	22-Nov-78
South Tyne	D/S Knaresdale	NY 683 554	10-May-79	21-Aug-78	22-Nov-78
South Tyne	Featherstone	NY 674 617	10-May-79	28-Jul-78	22-Nov-78
South Tyne	Bardon Mill	NY 781 643	10-May-79	28-Jul-78	28-Nov-78
South Tyne	Warden Bridge	NY 910 659	10-May-79	28-Jul-78	28-Nov-78
R.Tyne(NWA)	Corbridge	NY 990 641	10-May-79	21-Aug-78	28-Nov-78
R.Tyne(NWA)	Wylam	NZ 111 643	10-May-79	21-Aug-79	28-Nov-78
R.Wansbeck	Kirk Whelpington	NY 996 844	23-May-79	27-Jul-78	17-Nov-78
R.Wansbeck	Middleton	NZ 053 842	23-May-79	27-Jul-78	17-Nov-78
R.Wansbeck	Meldon	NZ 119 850	23-May-79	27-Jul-78	17-Nov-78
R.Wansbeck	Mitford Gauging Station	NZ 174 858	23-May-79	20-Jul-78	16-Nov-78
R.Wansbeck	Bothal	NZ 236 862	23-May-79	20-Jul-78	16-Nov-78
*R.Wansbeck	Bothal	NZ 237 862	23-May-79	20-Jul-78	16-Nov-78
R.Teith	Teith Bridge, Callander	NN 628 078	29-May-78	30-Aug-78	31-Oct-78
R.Teith	Laighlands	NN 668 045	29-May-78	01-Sep-78	31-Oct-78
R.Teith	Bridge of Teith, Doune	NN 723 013	29-May-78	01-Sep-78	31-Oct-78
*Water of Chon	Kinlochard	NN 435 035	24-May-78	14-Aug-78	31-Oct-78
R.Forth	Aberfoyle Bridge	NN 507 014	24-May-78	30-Aug-78	31-Oct-78
R.Forth	Parks of Garden	NS 599 974	24-May-78	29-Aug-78	30-Oct-78
R.Forth	Kippen Bridge	NS 669 960	23-May-78	29-Aug-78	30-Oct-78
*R.Forth	Kippen Bridge	NS 669 960	26-May-78	29-Aug-78	13-Oct-78
R.Forth	Gargunnock Bridge	NS 710 956	23-May-78	29-Aug-78	30-Oct-78
*R.Forth	Gargunnock Bridge	NS 710 956	25-May-78	31-Aug-78	13-Oct-78

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Forth	Drip Bridge	NS 770 955	23-May-78	02-Aug-78	30-Oct-78
R.Tyne(FRPB)	Crichton	NT 378 618	29-May-78	15-Aug-78	28-Nov-78
R.Tyne(FRPB)	Ormiston	NT 413 689	29-May-78	15-Aug-78	28-Nov-78
R.Tyne(FRPB)	Easter Pencaitland	NT 459 690	30-May-78	15-Aug-78	28-Nov-78
R.Tyne(FRPB)	Haddington Weir	NT 513 733	30-May-78	15-Aug-78	28-Nov-78
R.Tyne(FRPB)	East Linton	NT 593 772	01-Jun-78	15-Aug-78	28-Nov-78
*R.Deer	Linn Of Deer	NO 061 896	04-May-78	12-Sep-78	23-Oct-79
R.Deer	Braemar	NO 143 915	04-May-78	12-Sep-78	23-Oct-79
R.Deer	Balmoral	NO 271 944	31-May-78	11-Oct-78	23-Oct-79
R.Deer	D/S Ballater	NO 385 965	22-May-78	12-Sep-78	23-Oct-79
R.Deer	D/S Aboyne	NO 557 980	22-May-78	12-Sep-78	22-Oct-79
R.Deer	Potarch Bridge	NO 608 973	22-May-78	06-Oct-78	23-Oct-79
R.Deer	D/S Banchory	NO 719 964	22-May-78	06-Oct-78	22-Oct-79
R.Deer	Cults	NJ 904 023	22-May-78	06-Oct-78	22-Oct-79
R.Spey	Garva Bridge	NN 522 947	07-May-79	05-Jun-78	11-Oct-78
R.Spey	Laggan Bridge	NN 614 943	07-May-79	05-Jun-78	11-Oct-78
R.Spey	Newtonmore	NN 708 980	07-May-79	05-Jun-78	11-Oct-78
R.Spey	Boat of Garten	NH 946 188	07-May-79	06-Jun-78	11-Oct-78
R.Spey	Grantown	NJ 038 264	07-May-79	06-Jun-78	11-Oct-78
R.Spey	Marypark	NJ 183 388	07-May-79	09-Aug-79	11-Oct-78
*R.Spey	Craigellachie	NJ 283 452	08-May-79	09-Aug-79	11-Oct-78
R.Spey	Garmouth	NJ 343 610	08-May-79	06-Jun-78	11-Oct-78
R.Stinchar	Highbridge	NX 395 956	09-Jun-78	10-Jul-79	01-Oct-79
R.Stinchar	D/S Dalquhairn	NX 321 957	31-Mar-78	10-Jul-79	01-Oct-79
R.Stinchar	D/S Barr	NX 272 937	31-Mar-78	10-Jul-79	01-Oct-79
R.Stinchar	Pinmore Bridge	NX 204 899	09-Jun-78	10-Jul-79	01-Oct-79
R.Stinchar	D/S Colmonell	NX 140 858	31-Mar-78	10-Jul-79	01-Oct-79
R.Stinchar	Ballantrae	NX 089 825	31-Mar-78	10-Jul-79	01-Oct-79
R.Annan	Above Ericstane	NT 073 110	10-Apr-81	17-Jun-81	07-Sep-81
R.Annan	Moffat	NT 079 058	10-Apr-81	17-Jun-81	07-Sep-81
R.Annan	Newton Bridge	NY 109 949	10-Apr-81	17-Jun-81	07-Sep-81
R.Annan	Millhouse Bridge	NY 105 854	10-Apr-81	17-Jun-81	07-Sep-81
R.Annan	Williamwath Bridge	NY 118 760	10-Apr-81	17-Jun-81	07-Sep-81
R.Annan	Brydekirk	NY 187 707	10-Apr-81	17-Jun-81	07-Sep-81
Allt Coire Crubaidh	Allt Coire Crubaidh	NH 086 531	04-May-81	03-Aug-81	29-Sep-81
R.Lair	Achnashellach Lodge	NH 002 481	04-May-81	03-Aug-81	29-Sep-81
Fionn Abhainn	Fionn Abhainn	NG 957 453	04-May-81	03-Aug-81	29-Sep-81
R.Carron	D/S Loch Damhain	NH 081 520	04-May-81	03-Aug-81	29-Sep-81
R.Carron	Craig	NH 023 488	04-May-81	03-Aug-81	29-Sep-81
R.Carron	Balnacra	NG 978 458	04-May-81	03-Aug-81	29-Sep-81
R.Carron	New Kelso	NG 940 425	04-May-81	03-Aug-81	29-Sep-81
Traligill Burn	Traligill Burn	NC 250 218	06-May-81	15-Jul-81	03-Dec-81
R.Loanan	D/S Loch Awe	NC 250 162	06-May-81	15-Jul-81	03-Dec-81
R.Loanan	Inchnadamph	NC 246 216	06-May-81	15-Jul-81	03-Dec-81
R.Inver	Little Assynt	NC 154 250	06-May-81	15-Jul-81	03-Dec-81
R.Inver	Lochinver	NC 097 232	06-May-81	15-Jul-81	03-Dec-81
*Balnakeil Stream	Balnakeil	NC 392 686	21-Apr-81	11-Aug-81	03-Nov-81

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
Durness Stream	U/S Durness	NC 403 669	21-Apr-81	11-Aug-81	03-Nov-81
R.Halladale	Forsinard Lodge	NC 893 438	28-Apr-81	04-Aug-81	20-Oct-81
R.Halladale	Forsinain	NC 903 486	28-Apr-81	04-Aug-81	20-Oct-81
R.Halladale	Millburn	NC 890 560	28-Apr-81	04-Aug-81	20-Oct-81
R.Halladale	Golval	NC 896 618	28-Apr-81	04-Aug-81	20-Oct-81
Burn of Aultachleven	U/S Loch Rangag	ND 180 420	05-May-81	28-Jul-81	17-Nov-81
Little River	Tacher	ND 170 469	05-May-81	28-Jul-81	17-Nov-81
R.Thurso	Westerdale	ND 130 518	05-May-81	28-Jul-81	17-Nov-81
R.Thurso	Sordale	ND 143 621	05-May-81	28-Jul-81	17-Nov-81
R.Tweed	Fingland	NT 055 194	27-Apr-81	05-Aug-81	22-Oct-81
R.Tweed	Nether Rigs	NT 080 230	27-Apr-81	05-Aug-81	22-Oct-81
R.Tweed	Kingledores	NT 109 285	27-Apr-81	05-Aug-81	22-Oct-81
R.Tweed	Crownhead Bridge	NT 165 355	27-Apr-81	05-Aug-81	22-Oct-81
R.Tweed	Peebles Gauge	NT 258 400	27-Apr-81	05-Aug-81	22-Oct-81
R.Tweed	Old Tweed Bridge	NT 488 323	28-Apr-81	06-Aug-81	21-Oct-81
R.Tweed	Dry Grange Bridge	NT 576 347	28-Apr-81	06-Aug-81	19-Oct-81
R.Tweed	D/S Birgham	NT 814 393	28-Apr-81	06-Aug-81	19-Oct-81
R.Tweed	Canny Island	NT 893 465	28-Apr-81	06-Aug-81	19-Oct-81
R.Otter	Fairhouse Farm	ST 223 122	13-May-82	20-Jul-82	09-Nov-82
R.Otter	Bidwell Farm	ST 203 073	13-May-82	20-Jul-82	19-Nov-82
R.Otter	Monkton	ST 184 030	13-May-82	20-Jul-82	19-Nov-82
R.Otter	Colhayes Farm	SY 123 993	13-May-82	20-Jul-82	19-Nov-82
R.Otter	Newton Poppleford	SY 088 900	13-May-82	20-Jul-82	19-Nov-82
R.Frome	Chantmarle	ST 589 023	14-Apr-82	22-Jul-82	05-Nov-82
R.Frome	Frampton	SY 623 949	14-Apr-82	22-Jul-82	05-Nov-82
R.Frome	Lower Bockhampton	SY 721 904	14-Apr-82	22-Jul-82	05-Nov-82
R.Frome	Moreton	SY 806 895	14-Apr-82	22-Jul-82	05-Nov-82
R.Frome	East Stoke	SY 866 867	14-Apr-82	22-Jul-82	05-Nov-82
R.Axe (Somerset)	Wookey Hole	ST 531 473	21-Apr-82	20-Jul-82	27-Oct-82
R.Axe (Somerset)	Bleadney	ST 481 454	21-Apr-82	20-Jul-82	27-Oct-82
R.Axe (Somerset)	Oxmoor	ST 442 508	21-Apr-82	20-Jul-82	27-Oct-82
R.Axe (Somerset)	Lower Weare	ST 406 537	21-Apr-82	20-Jul-82	27-Oct-82
Oberwater	Mill Lawn	SU 227 036	28-Apr-82	29-Jul-82	04-Nov-82
Oberwater	Putles Bridge	SU 268 027	28-Apr-82	29-Jul-82	04-Nov-82
Highland Water	Millyford Bridge	SU 268 079	28-Apr-82	29-Jul-82	04-Nov-82
R.Lymington	Balmer Lawn	SU 297 036	28-Apr-82	29-Jul-82	04-Nov-82
R.Lymington	Boldre Bridge	SZ 320 984	28-Apr-82	29-Jul-82	02-Nov-82
R.Beult	Hadman's Place	TQ 865 425	13-May-82	12-Aug-82	02-Nov-82
R.Beult	Slaney Place	TQ 798 443	13-May-82	12-Aug-82	02-Nov-82
R.Beult	Stile Bridge	TQ 759 477	13-May-82	12-Aug-82	02-Nov-82
R.Beult	Hunton	TQ 706 495	13-May-82	12-Aug-82	02-Nov-82
R.Great Stour	Stonebridge Green	TQ 917 485	17-May-82	13-Aug-82	28-Oct-82
R.Great Stour	Little Chart Forstal	TQ 958 460	17-May-82	13-Aug-82	28-Oct-82
R.Great Stour	Wye	TR 048 469	17-May-82	13-Aug-82	28-Oct-82
R.Great Stour	Milton Bridge	TR 121 561	17-May-82	13-Aug-82	28-Oct-82
R.Great Stour	Fordwich	TR 179 597	17-May-82	13-Aug-82	28-Oct-82
R.Lugg	Monaughty	SO 238 681	05-May-82	05-Aug-82	27-Oct-82

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Lugg	Combe	SO 348 640	05-May-82	05-Aug-82	27-Oct-82
R.Lugg	Mortimer's Cross	SO 427 637	05-May-82	05-Aug-82	27-Oct-82
R.Lugg	Marlbrook	SO 510 551	05-May-82	04-Aug-82	27-Oct-82
R.Lugg	Wergin's Bridge	SO 529 446	05-May-82	04-Aug-82	27-Oct-82
*R.Wye	Bontrhydgaled	SN 844 825	06-May-82	06-Aug-82	28-Oct-82
R.Wye	Dolhelfa	SN 921 738	06-May-82	06-Aug-82	28-Oct-82
R.Wye	Llanwrthwl	SN 976 640	06-May-82	06-Aug-82	28-Oct-82
R.Wye	Hafodygarreg	SO 115 414	06-May-82	05-Aug-82	28-Oct-82
R.Wye	Bredwardine	SO 336 446	05-May-82	04-Aug-82	28-Oct-82
R.Wye	Huntsham Bridge	SO 567 182	05-May-82	04-Aug-82	27-Oct-82
R.Usk	U/S Usk Reservoir	SN 820 271	21-Apr-81	04-Aug-82	21-Jan-83
R.Usk	D/S Usk Reservoir	SN 839 291	21-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Trecastle	SN 882 287	21-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Trallong	SN 948 296	22-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Brecon Town Bridge	SO 043 285	22-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Llandetty	SO 127 204	22-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Crickhowell	SO 229 169	21-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Llanellen Bridge	SO 306 110	21-Apr-81	04-Aug-82	21-Jan-83
R.Usk	Llantrissant	ST 386 971	21-Apr-81	04-Aug-82	21-Jan-83
Eastern Cleddau	Plasymeibion	SN 129 274	30-Apr-82	07-Jul-82	02-Dec-82
Eastern Cleddau	West of Llandissilio	SN 106 224	30-Apr-82	07-Jul-82	02-Dec-82
Eastern Cleddau	Llawhaden	SN 075 172	30-Apr-82	07-Jul-82	02-Dec-82
Dwyfach	Pant Glas	SH 468 472	14-Apr-82	03-Aug-82	29-Nov-82
Dwyfach	Pont y Felin	SH 481 435	14-Apr-82	03-Aug-82	29-Nov-82
Dwyfach	Bont Fechan	SH 460 380	14-Apr-82	03-Aug-82	29-Nov-82
R.Blythe	Cheswick Green	SP 127 753	26-Apr-82	23-Jul-82	18-Oct-82
R.Blythe	Temple Balsall	SP 208 763	26-Apr-82	23-Jul-82	18-Oct-82
R.Blythe	Packington Ford	SP 218 852	26-Apr-82	23-Jul-82	18-Oct-82
R.Blythe	Blythe Bridge	SP 211 898	26-Apr-82	23-Jul-82	18-Oct-82
R.Thet	Red Bridge, Shropham	TL 996 924	19-May-82	20-Jul-82	13-Oct-82
R.Thet	East Harling	TL 989 867	20-May-82	20-Jul-82	13-Oct-82
R.Thet	Nuns Bridge, Thetford	TL 875 826	20-May-82	20-Jul-82	13-Oct-82
Little Ouse	Brandon	TL 783 868	20-May-82	20-Jul-82	13-Oct-82
Little Ouse	Brandon Creek	TL 607 917	14-May-82	22-Jul-82	06-Oct-82
Ten Mile River	Hilgay Bridge	TL 604 970	14-May-82	22-Jul-82	06-Oct-82
R.Exe	Flowerpot	SX 913 928	12-Apr-84	17-Jul-84	12-Oct-84
Sherston Stream	Washpool Bridge	ST 841 861	13-Apr-84	30-Jul-84	17-Oct-84
Hammer's Pond Tr.	Carter's Lodge	TQ 242 293	16-Apr-84	19-Jul-84	23-Oct-84
R.Rother	Hawkley Mill	SU 749 307	16-Apr-84	19-Jul-84	23-Oct-84
R.South Tyne	South Tyne Head	NY 755 361	01-Jun-84	30-Aug-84	04-Dec-84
Caorunn Achaidh	Comer	NN 386 043	02-May-84	03-Aug-84	02-Nov-84
Allt Tairbh	Teapot	NN 440 032	02-May-84	03-Aug-84	02-Nov-84
Green Burn	Dalmary	NS 515 955	02-May-84	03-Aug-84	02-Nov-84
R.Carron	U/S Loch Sgamhain	NH 116 537	25-Apr-84	10-Aug-84	16-Oct-84
R.Thurso Trib.A	Achavanich	ND 180 408	17-Apr-84	28-Aug-84	08-Nov-84
*R.Thurso Trib.B	Halsary	ND 173 482	17-Apr-84	28-Aug-84	08-Nov-84
R.Thurso Trib.C	Westerdale	ND 123 517	17-Apr-84	28-Aug-84	08-Nov-84

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
Holy Stream	Hethfelton	SY 852 875	03-Apr-84	15-Jul-84	14-Oct-84
Wool Stream	Wool	SY 848 869	03-Apr-84	15-Jul-84	14-Oct-84
Oberwater	Vereley	SU 205 050	05-Apr-84	12-Jul-84	02-Oct-84
Bratley Water	Bratley	SU 231 098	05-Apr-84	12-Jul-84	02-Oct-84
Highland Water	Ocknell	SU 245 112	05-Apr-84	12-Jul-84	02-Oct-84
*Great Stour	Chilston Park	TQ 903 503	21-May-84	14-Aug-84	21-Nov-84
R.Wye	Redbrook	SO 534 100	03-May-84	03-Aug-84	10-Oct-84
R.Lugg	Crug	SO 184 730	03-May-84	02-Aug-84	09-Oct-84
Afon Wern Trib.	Mynachlog-Ddu	SN 118 307	30-Apr-84	31-Jul-84	16-Nov-84
Great Ouse	U/S Brackley	SP 562 380	25-Apr-84	10-Jul-84	03-Oct-84
Great Ouse	Sharnbrook	TL 010 590	25-Apr-84	10-Jul-84	03-Oct-84
Great Ouse	Roxton Lock	TL 160 535	25-Apr-84	10-Jul-84	03-Oct-84
R.Nene Trib.	Bonemills Hollow	TF 042 023	26-Apr-84	11-Jul-84	04-Oct-84
Mounton Brook	Bully Hole Bottom	ST 460 962	04-Apr-84	03-Aug-84	10-Oct-84
R.Severn	Stourport	SO 805 710	02-Apr-84	02-Aug-84	09-Oct-84
*Carey's Brook	Bastonford	SO 811 506	02-May-84	02-Aug-84	09-Oct-84
Cannop Brook	Speculation	SO 610 128	03-May-84	03-Aug-84	10-Oct-84
Middlemarsh Str.	Grange Wood	ST 665 073	14-Apr-84	30-Jul-84	29-Oct-84
R.Stour	Longham	SZ 065 973	12-Apr-84	17-Jul-84	12-Oct-84
R.Thames	Malthouse	SU 225 984	09-May-84	26-Jul-84	17-Oct-84
R.Thames	Bablock Hythe	SP 435 042	09-May-84	26-Jul-84	17-Oct-84
R.Thames	Shillingford	SU 590 932	09-May-84	26-Jul-84	17-Oct-84
R.Thames	Reading	SU 726 740	08-May-84	25-Jul-84	16-Oct-84
R.Thames	Spade Oak	SU 884 875	08-May-84	25-Jul-84	16-Oct-84
R.Thames	Runnymede	TQ 008 725	08-May-84	25-Jul-84	16-Oct-84
R.Bran	Ledgowan	NH 128 553	25-Apr-84	10-Aug-84	16-Oct-84
R.Crane	D/S Cranborne	SU 062 129	26-Apr-85	16-Jul-85	21-Oct-85
R.Crane	Great Rhymes Copse	SU 077 121	26-Apr-85	16-Jul-85	21-Oct-85
R.Crane	Pinnocks Moor	SU 077 112	10-Apr-85	16-Jul-85	21-Oct-85
R.Crane	Romford Bridge	SU 075 094	10-Apr-85	16-Jul-85	21-Oct-85
R.Crane	Redmans Hill	SU 074 079	26-Apr-85	16-Jul-85	21-Oct-85
R.Crane	Verwood	SU 088 075	10-Apr-85	16-Jul-85	21-Oct-85
Moors R.	King's Farm	SU 105 064	05-Mar-85	17-Jul-85	21-Oct-85
Moors R.	East Moors Farm	SU 101 029	22-Apr-86	22-Jul-86	28-Oct-86
*R.Ed	Edmondsham	SU 063 114	16-Apr-85	17-Jul-85	22-Oct-85
R.Ed	Upper Farm	SU 067 112	16-Apr-85	17-Jul-85	22-Oct-85
R.Ed	Pains Moor	SU 074 105	22-Apr-86	17-Jul-85	22-Oct-85
Birches Copse	In wood U/S trib	SU 069 099	16-Apr-85	17-Jul-85	22-Oct-85
Birches Copse	D/S wood	SU 074 098	26-Apr-85	17-Jul-85	22-Oct-85
*Westworth Stream	Westworth Farm	SU 080 101	26-Apr-85	16-Jul-85	21-Oct-85
Mannington Brook	Horton Heath	SU 054 067	26-Apr-85	17-Jul-85	22-Oct-85
Mannington Brook	Newman's Lane	SU 077 042	26-Apr-85	17-Jul-85	22-Oct-85
R.Teith	Blackdub	NS 763 966	21-May-86	06-Aug-86	23-Oct-86
R.Larig	Blaircreich	NN 437 181	21-May-86	07-Aug-86	23-Oct-86
*R.Balvag	Strathyre	NN 559 168	21-May-86	07-Aug-86	23-Oct-86
R.Cree	Wheeb Bridge	NX 302 806	15-May-86	31-Jul-86	16-Oct-86
R.Cree	High Fagan	NX 341 774	15-May-86	31-Jul-86	16-Oct-86

Appendix A (contd)

River	Site	NGR	Spring	Summer	Autumn
*R.Cree	Cordorcan Burn Inflow	NX 380 709	15-May-86	31-Jul-86	16-Oct-86
R.Cree	Newton Stewart	NX 415 648	15-May-86	31-Jul-86	16-Oct-86
R.Strontian	Ariundle Oakwood NNR	NM 843 641	16-May-86	01-Aug-86	17-Oct-86
R.Strontian	Anaheilt	NM 816 624	16-May-86	01-Aug-86	17-Oct-86
Cnocloisgte Water	U/S Loch Caluim	ND 025 511	19-May-86	03-Aug-86	19-Oct-86
Forss Water	Achalone	ND 041 630	18-May-86	04-Aug-86	19-Oct-86
Forss Water	Crosskirk	ND 029 699	18-May-86	04-Aug-86	19-Oct-86
Burn of Latheronwheel	Den Moss	ND 179 360	17-May-86	03-Aug-86	19-Oct-86
Burn of Latheronwheel	Landhallow	ND 184 332	18-May-86	03-Aug-86	19-Oct-86
R.Oykel	Caplich	NC 351 028	17-May-86	05-Aug-86	20-Oct-86
R.Oykel	Strathoykel	NC 438 014	17-May-86	04-Aug-86	20-Oct-86
Lunan Burn	Forneth	NO 097 452	20-May-86	06-Aug-86	22-Oct-86
*Lunan Burn	D/S Loch Clunie	NO 125 443	20-May-86	06-Aug-86	22-Oct-86
*Lunan Burn	Easter Essendy	NO 148 433	20-May-86	05-Aug-86	22-Oct-86
R.Synderford	Venn Hill	ST 383 037	23-Apr-86	16-Jul-86	16-Oct-86
Blackwater River	Beerhall	ST 358 010	23-Apr-86	16-Jul-86	16-Oct-86
Kit Brook	Kit Bridge	ST 308 039	23-Apr-86	16-Jul-86	16-Oct-86
R.Yarty	Crawley Bridge	ST 256 080	23-Apr-86	16-Jul-86	16-Oct-86
R.Yarty	Gammons Hill	SY 283 983	23-Apr-86	16-Jul-86	16-Oct-86
Corry Brook	Coryton	SY 270 991	23-Apr-86	16-Jul-86	16-Oct-86
Umborne Brook	Easy Bridge	SY 240 969	23-Apr-86	16-Jul-86	16-Oct-86

Appendix B The location and sampling dates of the 103 sites sampled under contract to the Nature Conservancy Council between 1987 and 1991.

River	Site	NGR	Spring	Summer	Autumn
R.Arrow	Kesty	SO 179 539	22-Apr-87	29-Jul-87	13-Oct-87
R.Arrow	Kington Urban	SO 288 561	22-Apr-87	29-Jul-87	12-Oct-87
R.Arrow	Folly Farm	SO 413 588	22-Apr-87	28-Jul-87	12-Oct-87
R.Arrow	Ivington	SO 477 572	21-Apr-87	28-Jul-87	12-Oct-87
R.Teme	Felindre	SO 162 821	22-Apr-87	29-Jul-87	13-Oct-87
R.Teme	Pennant Pound	SO 215 773	22-Apr-87	29-Jul-87	13-Oct-87
R.Teme	Brampton Bryan	SO 372 729	23-Apr-87	29-Jul-87	13-Oct-87
R.Teme	Tenbury	SO 595 685	23-Apr-87	30-Jul-87	14-Oct-87
R.Teme	Powick Bridge	SO 837 524	23-Apr-87	30-Jul-87	14-Oct-87
R.Bure	Corpusty	TG 105 305	24-Apr-87	31-Jul-87	15-Oct-87
R.Bure	Whitehouse Farm Ford	TG 164 305	24-Apr-87	31-Jul-87	15-Oct-87
R.Bure	Buxton Mill	TG 243 231	24-Apr-87	31-Jul-87	15-Oct-87
R.Bure	Coltishall Bridge	TG 267 198	24-Apr-87	31-Jul-87	15-Oct-87
R.Test	Lower Brook	SU 338 276	29-Apr-87	22-Jul-87	21-Oct-87
R.Test	Romsey	SU 352 204	29-Apr-87	22-Jul-87	21-Oct-87
R.Test	Skidmore	SU 354 178	29-Apr-87	22-Jul-87	21-Oct-87
R.Piddle	Piddletrenthide	ST 703 010	14-Apr-87	23-Jul-87	22-Oct-87
R.Piddle	Druce	SY 744 951	14-Apr-87	23-Jul-87	22-Oct-87
R.Piddle	Brockhill Bridge	SY 839 928	15-Apr-87	23-Jul-87	21-Oct-87
R.Piddle	Wareham	SY 919 876	15-Apr-87	24-Jul-87	22-Oct-87
Bere Stream	Middle Bere	SY 858 923	15-Apr-87	24-Jul-87	22-Oct-87
R.Barle	Goat Hill	SS 724 406	26-Apr-88	13-Jul-88	19-Oct-88
R.Barle	Cow Castle	SS 798 369	27-Apr-88	13-Jul-88	20-Oct-88
R.Barle	South Hill	SS 852 349	27-Apr-88	13-Jul-88	20-Oct-88
R.Barle	Pixton Hill	SS 925 263	27-Apr-88	01-Aug-88	20-Oct-88
By Brook	Gatcombe Hill	ST 834 789	22-Apr-88	08-Jul-88	14-Oct-88
By Brook	Slaughterford	ST 837 738	22-Apr-88	07-Jul-88	14-Oct-88
By Brook	Ashley	ST 815 687	22-Apr-88	08-Jul-88	14-Oct-88
R.Monnow	Llanveynoe	SO 309 318	20-Apr-88	05-Jul-88	12-Oct-88
R.Monnow	Clodock	SO 327 278	19-Apr-88	06-Jul-88	12-Oct-88
R.Monnow	Great Goytre	SO 365 245	20-Apr-88	06-Jul-88	13-Oct-88
R.Monnow	Rockfield	SO 483 153	19-Apr-88	05-Jul-88	13-Oct-88
R.Brue	South Brewham	ST 716 363	18-Apr-88	04-Jul-88	06-Oct-88
R.Brue	Wyke	ST 656 340	18-Apr-88	04-Jul-88	21-Oct-88
R.Brue	Tootle Bridge	ST 551 327	18-Apr-88	04-Jul-88	21-Oct-88
R.Brue	Liberty Farm	ST 384 446	19-Apr-88	05-Jul-88	06-Oct-88
Dowles Brook	D/s Lem Brook	SO 723 766	21-Apr-88	07-Jul-88	05-Oct-88
Dowles Brook	U/s Dowles Manor	SO 770 763	21-Apr-88	07-Jul-88	05-Oct-88
R.Clun	Whitcott Keysett	SO 279 822	21-Apr-88	06-Jul-88	25-Oct-88
R.Clun	Purslow	SO 358 807	21-Apr-88	06-Jul-88	25-Oct-88
R.Clun	Jay	SO 394 754	20-Apr-88	06-Jul-88	25-Oct-88
R.Teign	Leigh Bridge	SX 683 879	25-Apr-88	11-Jul-88	17-Oct-88
R.Teign	Fingle Bridge	SX 745 898	25-Apr-88	11-Jul-88	17-Oct-88

Appendix B (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Teign	Whetcombe Barton	SX 843 817	25-Apr-88	11-Jul-88	17-Oct-88
R.Fowey	Codda Ford	SX 183 786	25-Apr-88	12-Jul-88	18-Oct-88
R.Fowey	Draynes Bridge	SX 228 689	25-Apr-88	12-Jul-88	18-Oct-88
R.Fowey	Leball Bridge	SX 134 653	26-Apr-88	12-Jul-88	18-Oct-88
Coombe Valley Stream	Kilkhampton	SS 246 116	26-Apr-88	12-Jul-88	19-Oct-88
Coombe Valley Stream	Coombe	SS 215 116	26-Apr-88	12-Jul-88	19-Oct-88
Cowside Beck	Nab End	SD 903 700	12-Apr-89	18-Jul-89	03-Oct-89
Cowside Beck	Arncliffe	SD 930 719	12-Apr-89	19-Jul-89	03-Oct-89
Gordale Beck	Seaty Hill	SD 912 654	12-Apr-89	18-Jul-89	03-Oct-89
Gordale Beck	Gordale Bridge	SD 914 636	11-Apr-89	18-Jul-89	03-Oct-89
R.Brora	Dalnessie	NC 631 155	16-Apr-89	08-Jul-89	14-Oct-89
R.Brora	U/s Balnacoll	NC 789 106	15-Apr-89	09-Jul-89	14-Oct-89
R.Brora	D/s Loch Brora	NC 870 046	14-Apr-89	08-Jul-89	16-Oct-89
R.Blackwater	Creag Dhubh	NC 684 202	15-Apr-89	09-Jul-89	15-Oct-89
R.Blackwater	Pollie	NC 747 160	15-Apr-89	09-Jul-89	15-Oct-89
R.Laxford	D/s Loch Stack	NC 259 447	17-Apr-89	11-Jul-89	16-Oct-89
R.Hull	Little Driffield	TA 010 576	22-Apr-89	28-Jul-89	10-Oct-89
R.Hull	Wansford	TA 064 559	21-Apr-89	28-Jul-89	11-Oct-89
R.Hull	Corpslanding	TA 066 529	21-Apr-89	28-Jul-89	10-Oct-89
Kelk Beck	Harpham	TA 084 614	22-Apr-89	28-Jul-89	11-Oct-89
Kelk Beck	Foston	TA 092 551	22-Apr-89	27-Jul-89	11-Oct-89
Knock Ore Gill	Green Castle	NY 711 306	13-Apr-89	30-Jul-89	18-Oct-89
Whiteadder	Cranshaws	NT 689 626	20-Apr-90	21-Aug-90	15-Nov-90
Whiteadder	Preston Haugh	NT 774 577	20-Apr-90	27-Aug-90	15-Nov-90
Whiteadder	U/s Allanton	NT 864 547	19-Apr-90	24-Aug-90	12-Nov-90
Whiteadder	Chesterfield Ford	NT 937 536	20-Apr-90	24-Aug-90	12-Nov-90
Blackadder	Halliburton Bridge	NT 677 478	18-Apr-90	23-Aug-90	09-Nov-90
Blackadder	Fogo	NT 770 491	18-Apr-90	23-Aug-90	09-Nov-90
Blackadder	Blackadder Water Foot	NT 864 545	18-Apr-90	24-Aug-90	12-Nov-90
R.Wissey	North Pickenham	TF 866 067	26-Mar-90	09-Jul-90	19-Nov-90
R.Wissey	Linghills Farm	TF 834 009	26-Mar-90	09-Jul-90	19-Nov-90
R.Wissey	Didlington Lodge	TL 771 967	29-Mar-90	23-Aug-90	26-Nov-90
R.Wissey	Five Mile House	TL 664 977	29-Mar-90	20-Aug-90	21-Nov-90
R.Walkham	Merrivale	SX 550 751	19-Apr-90	20-Jul-90	16-Oct-90
R.Walkham	Grenofen	SX 489 710	19-Apr-90	20-Jul-90	16-Oct-90
R.Lathkill	Alport	SK 220 646	26-Apr-90	01-Aug-90	05-Nov-90
R.Lathkill	Congreave	SK 242 657	26-Apr-90	01-Aug-90	05-Nov-90
R.Coquet	Carshope	NT 851 109	11-Apr-90	12-Jul-90	17-Oct-90
R.Coquet	Linshiels	NT 894 062	11-Apr-90	12-Jul-90	17-Oct-90
R.Coquet	Sharperton	NT 954 038	11-Apr-90	12-Jul-90	17-Oct-90
R.Coquet	Pauperhaugh	NZ 101 995	11-Apr-90	12-Jul-90	17-Oct-90
R.Coquet	Coquet Lodge	NU 238 061	01-May-90	12-Jul-90	25-Oct-90
De Lank	Bradford	SX 114 758	26-Mar-90	26-Jun-90	03-Oct-90
De Lank	Keybridge	SX 089 739	26-Mar-90	26-Jun-90	03-Oct-90
R.Wharfe	Hubberholme	SD 933 783	08-May-90	17-Jul-90	16-Oct-90

Appendix B (contd)

River	Site	NGR	Spring	Summer	Autumn
R.Wharfe	Grassington	SD 997 639	08-May-90	17-Jul-90	16-Oct-90
R.Wharfe	Addingham	SE 084 499	08-May-90	03-Aug-90	25-Oct-90
R.Wharfe	Otley	SE 188 455	09-May-90	03-Aug-90	25-Oct-90
R.Wharfe	Wetherby	SE 406 477	09-May-90	03-Aug-90	23-Nov-90
Western Cleddau	Wolf's Castle	SM 956 256	20-Apr-90	07-Aug-90	06-Nov-90
Western Cleddau	Treffgarne	SM 959 230	24-Apr-90	07-Aug-90	07-Nov-90
Western Cleddau	Crow Hill	SM 954 177	20-Apr-90	07-Aug-90	06-Nov-90
R.Loddon	Oliver's Battery	SU 667 537	21-Mar-90	02-Jul-90	27-Sep-90
R.Loddon	Sherfield On Loddon	SU 683 583	21-Mar-90	14-Jun-90	20-Sep-90
R.Enborne	Brimpton	SU 568 648	06-Mar-90	06-Jun-90	27-Sep-90
R.Bladnoch	Glassoch Bridge	NX 333 695	11-Apr-90	30-Aug-90	21-Nov-90
R.Bladnoch	Spittal	NX 360 579	30-May-90	30-Aug-90	21-Nov 90
R.Lonan	Clachadubh	NM 937 280	04-Apr-90	24-Jul-90	05-Nov-90
Lusragan Burn	Cluny Villa	NM 908 327	04-Apr-90	24-Jul-90	05-Nov-90
Aber	Abergwynngregyn	SH 657 727	23-Apr-91	27-Aug-91	07-Sep-90

Appendix C Full taxon lists for each new site sampled by Anglian region. The three columns for each site represent spring, summer and autumn.

+ = taxon present and 0 = taxon absent from sample.

1 GOULCEBY BECK	GOULCEBY	08 MAY 1990	17 SEP 1990	30 NOV 1990				
2 CRINGLE BROOK	THUNDERBRIDGE	05 APR 1990	17 SEP 1990	16 NOV 1990				
3 REACH LODE	HALLARDS FEN ROAD	14 MAR 1990	27 JUN 1990	01 OCT 1990				
4 MONKS LODE	ETERNITY HALL BRIDGE	02 MAY 1990	02 AUG 1990	30 OCT 1990				
5 16 FOOT DRAIN	HORSEWAYS CORNER	25 APR 1990	14 AUG 1990	13 NOV 1990				
6 R. RASE	BULLY HILLS	20 MAR 1990	17 SEP 1990	30 NOV 1990				
7 ORFORD BECK	KIRMOND LE MIRE	20 MAR 1990	17 SEP 1990	30 NOV 1990				
8 R. BAIN	BISCATHORPE	08 MAY 1990	17 SEP 1990	30 NOV 1990				
		1	2	3	4	5	6	7
Planaria torva		000	000	+00	000	0+0	000	000
Polycelis nigra group		000	00+	+++	000	000	000	000
Polycelis felina		000	000	000	000	000	+++	+00
Dugesia tigrina		000	000	+00	000	00+	000	000
Dugesia polychroa group		000	000	0+0	0+0	+00	000	000
Crenobia alpina		000	000	000	000	000	000	00+
Dendrocoelum lacteum		000	000	+00	0+0	000	000	000
Valvata cristata		000	000	000	000	0+0	000	000
Valvata piscinalis		000	00+	+00	000	+++	000	000
Potamopyrgus jenkinsi		+++	+++	00+	+++	+++	+++	+++
Bithynia tentaculata		000	000	+++	+++	+++	000	000
Bithynia leachii		000	000	+++	+00	0+0	000	000
Lymnaea stagnalis		000	000	+0+	00+	000	000	000
Lymnaea peregra		+++	+++	+++	0+0	+00	000	000
Physa fontinalis		000	00+	0++	+++	+++	000	000
Planorbis carinatus		000	0+0	+00	+++	+++	000	000
Anisus vortex		000	0++	+0+	+00	+00	000	000
Gyraulus albus		000	0++	0+0	000	000	000	00+
Armiger crista		000	+++	+00	000	000	000	000
Bathymphalus contortus		000	000	+00	000	000	000	000
Hippeutis complanatus		000	000	+00	000	000	000	000
Acroloxus lacustris		000	000	+++	000	000	000	000
Ancylus fluviatilis		+++	000	000	000	000	000	+++
Succinea sp.		000	000	000	000	000	000	+0
Unio pictorum		000	000	+00	000	000	000	000
Anodonta group		000	000	000	000	00+	000	000
Sphaerium corneum		000	00+	+++	+++	+++	000	000
Sphaerium lacustre		000	000	000	000	+00	000	000
Pisidium sp.		000	000	0+0	+00	00+	000	0+0
Pisidium casertanum		000	000	+00	000	000	000	+00
Pisidium personatum		+00	+00	000	000	000	000	000
Pisidium subtruncatum		00+	+++	00+	00+	+00	+++	00+
Pisidium henslowianum		000	000	000	000	+00	000	000
Pisidium hibernicum		000	000	+00	000	000	000	000
Pisidium nitidum		00+	+++	+00	00+	+00	000	00+
Chaetogaster diaphanus		000	000	000	000	000	000	+00
Ophidonais serpentina		000	000	000	000	000	000	+0+
Nais elinguis		+00	000	000	000	+00	000	+00
Stylaria lacustris		000	0+0	0+0	00+	000	000	000
Tubificidae		00+	00+	0+0	0+0	000	0+0	000
Tubifex tubifex		+00	000	+00	000	000	+00	000
Psammoryctides barbatus		000	+++	000	000	+0+	000	00+
Limnodrilus hoffmeisteri		+0+	+00	+00	+00	+0+	+0+	+0+
Limnodrilus udekemianus		000	000	000	000	+++	000	000
Potamothenix hammoniensis		000	000	00+	+0+	0+0	000	000
Potamothenix moldaviensis		000	000	000	000	+0+	000	000
Rhyacodrilus coccineus		000	+00	000	000	000	000	000
Aulodrilus plurisetia		000	0+0	000	000	000	+++	+00
Enchytraeus group		000	00+	000	000	000	000	+0+
Lumbriculus variegatus group		+00	00+	000	000	+++	000	00+
Stylodrilus sp.		0+0	00+	000	000	000	0+0	+00
Stylodrilus heringianus		+0+	+00	000	000	000	000	+00
Lumbricidae		000	0+0	000	000	000	000	000
Eiseniella tetraedra		000	000	000	000	000	+++	+00
Pisicicola geometra		00+	000	0+0	00+	+0+	000	000
Theromyzon tessulatum		00+	000	00+	00+	000	000	000
Hemiclepeis marginata		000	000	000	0+0	000	000	000

Appendix C (contd)

	1	2	3	4	5	6	7	8
Glossiphonia heteroclita	000	000	0+0	000	000	000	000	000
Glossiphonia complanata	0+0	0++	+++	000	+++	+++	+++	0++
Helobdella stagnalis	000	+++	++0	0+0	+++	000	000	0+0
Erpobdella octoculata	000	+++	+++	+++	+++	000	000	0+0
Hydracarina	+++	0++	0+0	+00	000	+++	+00	+++
Asellus aquaticus	000	+++	+++	+++	+++	000	000	000
Corophium curvispinum	000	000	000	000	00+	000	000	000
Crangonyx pseudogracilis	000	000	+++	+++	+++	000	000	000
Gammarus pulex	+++	+++	000	000	+++	+++	+++	+++
Austropotamobius pallipes	000	00+	000	000	000	000	000	000
Baetis scambus group	000	0++	000	000	000	000	000	0+0
Baetis vernus	0+0	0+0	000	000	000	000	000	0+0
Baetis rhodani	++0	+0+	000	000	000	+++	+++	+++
Baetis muticus	000	000	000	000	000	0+0	000	000
Centroptilum luteolum	00+	0+0	000	000	000	000	000	0+0
Cloeon dipterum	000	000	+0+	+++	+0+	000	000	000
Cloeon simile	000	000	0+0	000	000	000	000	000
Paraleptophlebia submarginata	00+	+0+	000	000	000	000	+00	0++
Habrophlebia fusca	000	000	000	000	000	000	000	+00
Ephemerella ignita	0++	0+0	000	000	000	000	000	+++
Ephemera sp.	000	+00	000	000	000	000	000	000
Ephemera danica	+++	0++	000	000	000	+++	+++	+++
Caenis luctuosa group	+0+	+++	000	000	000	000	000	+++
Caenis robusta	000	000	0+0	000	000	000	000	000
Caenis horaria	000	000	000	+00	+0+	000	000	000
Caenis rivulorum	000	0+0	000	000	000	000	000	000
Taeniopteryx nebulosa	000	000	000	000	000	000	0+0	00+
Amphinemura standfussi	+00	000	000	000	000	000	000	000
Nemoura sp.	000	000	000	000	000	00+	000	000
Nemoura avicularis	00+	000	000	000	000	+00	+++	00+
Nemoura cambrica group	000	000	000	000	000	+00	000	000
Leuctra geniculata	000	+00	000	000	000	000	000	000
Leuctra fusca	000	0+0	000	000	000	000	000	0+0
Isoperla grammatica	00+	+00	000	000	000	000	+00	+++
Coenagrionidae	000	0+0	000	000	000	000	000	000
Ischnura elegans	000	000	+++	+++	+0+	000	000	000
Enallagma cyathigerum	000	000	000	+00	000	000	000	000
Coenagrion puella group	000	000	+00	+00	0+0	000	000	000
Erythronma najas	000	000	+0+	000	+00	000	000	000
Aeshna sp.	000	000	000	+00	+00	000	000	000
Mesovelia furcata	000	000	000	0+0	000	000	000	000
Hydrometra stagnorum	000	000	000	000	00+	000	000	000
Velia sp.	0+0	000	000	000	000	000	000	000
Velia caprai	000	000	000	000	000	0+0	000	000
Gerris sp.	000	0+0	000	000	000	000	000	000
Nepa cinerea	000	000	+00	000	000	000	000	000
Ilyocoris cimicoides	000	000	000	0+0	000	000	000	000
Notonecta sp.	000	000	0+0	+00	000	000	000	000
Notonecta glauca	000	000	+0+	0++	+00	000	000	000
Micronecta sp.	000	00+	000	000	000	000	000	000
Cymatia coleoptrata	000	000	000	000	00+	000	000	000
Corixa punctata	000	000	000	000	000	000	000	0+0
Sigara (Sigara) sp.	000	0+0	++0	0++	00+	+00	000	0+0
Sigara falleni	000	0+0	++0	000	++0	000	000	000
Sigara nigrolineata	000	000	000	000	000	000	+00	000
Brychius elevatus	0+0	000	000	000	000	000	000	0+0
Haliphus sp.	00+	00+	000	000	00+	0+0	000	00+
Haliphus confinis	000	000	000	00+	000	000	000	000
Haliphus lineatocollis	000	000	00+	000	000	000	000	000
Haliphus ruficollis	000	000	000	0+0	000	000	000	000
Haliphus fluviatilis	000	000	+++	000	+00	000	000	000
Haliphus lineolatus	000	000	0+0	000	+00	000	000	000
Haliphus immaculatus	000	000	+++	+0+	++0	000	000	000
Haliphus laminatus	000	0+0	000	000	000	000	000	000
Haliphus wehnckeii	000	0+0	000	000	000	000	000	000
Noterus clavicornis	000	000	00+	0+0	+00	000	000	000
Laccophilus sp.	000	000	000	000	0+0	000	000	000
Laccophilus hyalinus	000	000	0++	000	+00	000	000	000
Hyphydrus ovatus	000	000	00+	++0	000	000	000	000
Hygrotus versicolor	000	000	+00	000	+0+	000	000	000
Potamonectes depressus	0++	000	000	000	+00	000	000	000
Stictotarsus duodecimpustulatus	000	000	++0	00+	0+0	000	000	000
Oreodytes sanmarkii	+++	000	000	000	000	000	+0+	000
Hydroporus palustris	000	000	+00	000	000	000	000	000
Agabus sp.	+00	000	000	000	000	000	000	+00
Agabus paludosus	0+0	000	000	000	000	000	000	000
Platambus maculatus	0++	0+0	000	000	000	00+	000	000
Ilybius sp.	000	000	000	000	000	000	000	0+0
Ilybius fuliginosus	0+0	000	000	000	000	000	000	000
Scarodytes halensis	000	000	000	000	000	000	000	0+0
Gyrinus sp.	000	000	0+0	0+0	000	000	000	000
Gyrinus marinus	000	000	00+	00+	000	000	000	000

Appendix C (contd)

	1	2	3	4	5	6	7	8
Orectochilus villosus	000	+++	000	000	000	000	000	0+0
Limnebius nitidus	000	000	00+	000	000	000	000	000
Helophorus brevipalpis	000	000	000	000	000	0+0	000	+00
Hydrobius fuscipes	000	000	+00	000	000	000	000	000
Enochrus testaceus	000	000	+00	000	0+0	000	000	000
Elodes sp.	00+	0+0	000	000	000	0++	+++	+00
Dryops sp.	+00	000	000	000	000	000	000	000
Elmis aenea	+++	+++	000	000	000	+++	+++	+++
Limnius volckmari	+00	000	000	000	000	+++	+++	0+0
Oulimnius sp.	000	0++	000	000	0+0	000	000	000
Oulimnius rivularis	000	000	+++	000	+0+	000	000	000
Oulimnius major	000	000	+00	0+0	000	000	000	000
Riolus sp.	000	000	000	000	000	000	+00	000
Riolus subviolaceus	000	+++	000	000	000	+++	0+0	+++
Sialis lutaria	0+0	0++	+00	+++	+00	0+0	000	0+0
Sialis fuliginosa	000	000	000	000	000	000	00+	000
Sisyra sp.	000	000	00+	000	000	000	000	000
Rhyacophila dorsalis	000	00+	000	000	000	+0+	+00	+++
Agapetus sp.	000	000	000	000	000	+++	00+	000
Plectrocnemia conspersa	000	000	000	000	000	+0+	0+0	000
Polycentropus sp.	000	00+	000	000	000	000	000	000
Polycentropus flavomaculatus	000	+00	000	000	000	000	000	000
Holocentropus picicornis	000	000	+0+	000	0++	000	000	000
Cyrrus flavidus	000	000	0++	0+0	+0+	000	000	000
Ecnomus tenellus	000	000	000	000	00+	000	000	000
Tinodes waeneri	000	+0+	000	000	000	000	000	000
Lype sp.	000	000	000	000	000	000	00+	000
Hydropsyche pellucidula	00+	+00	000	000	000	000	000	000
Hydropsyche angustipennis	0+0	000	000	000	000	000	000	0+0
Hydropsyche siltalai	+0+	+0+	000	000	000	+++	+0+	+0+
Agraylea multipunctata	000	0+0	000	000	000	000	000	000
Agraylea sexmaculata	000	000	00+	000	000	000	000	000
Hydroptila sp.	+00	+++	000	000	000	000	000	00+
Ithytrichia sp.	000	+00	000	000	000	000	000	000
Oxyethira sp.	000	0+0	000	000	000	000	000	000
Phryganea group	000	000	0++	0+0	000	000	000	000
Limnephilidae	000	00+	000	000	000	000	+00	+00
Drusus annulatus	000	000	000	000	000	000	+0+	0+0
Limnephilus marmoratus	000	000	000	+00	000	000	000	000
Limnephilus lunatus group	000	+00	+00	000	000	+00	+00	000
Limnephilus extricatus	0+0	000	000	000	000	000	000	000
Potamophylax latipennis	000	000	000	000	000	000	000	00+
Stenophylax group	000	000	000	000	000	00+	000	000
Micropterna sequax	000	000	000	000	000	000	0++	000
Molanna angustata	000	000	0+0	000	000	000	000	000
Athripsodes aterrimus	000	000	+00	+0+	000	000	000	000
Athripsodes albifrons	000	+0+	000	000	000	000	000	000
Mystacides nigra	000	000	00+	000	000	000	000	000
Mystacides azurea	000	0+0	000	000	000	000	000	000
Mystacides longicornis	000	000	000	000	+0+	000	000	000
Trienodes bicolor	000	000	000	+00	000	000	000	000
Oecetis lacustris	000	000	0+0	000	00+	000	000	000
Ceraclea senilis	000	000	000	+00	000	000	000	000
Goera pilosa	000	00+	000	000	000	000	000	000
Silo pallipes	000	+00	000	000	000	000	+++	+++
Silo nigricornis	000	+00	000	000	000	000	000	000
Crunoecia irrorata	000	+00	000	000	000	+00	000	000
Lepidostoma hirtum	000	00+	000	000	000	000	000	000
Sericostoma personatum	000	000	000	000	000	+++	+++	000
Non-gilled Pyralidae	0+0	000	+0+	000	000	000	+00	000
Tipula montium group	00+	000	+00	000	000	000	000	00+
Tipula paludosa	000	000	+00	000	000	000	000	000
Tipula maxima	000	+00	000	000	000	000	000	000
Tipula vittata	000	000	000	000	000	000	0+0	000
Helius sp.	000	000	+0+	000	000	000	000	000
Dicranota sp.	+++	+++	000	000	000	+00	+++	+++
Limnophila (Limnophila) sp.	000	000	000	000	000	000	000	00+
Limnophila (Eloeophila) sp.	+++	000	000	000	000	00+	+00	000
Pilaria (Pilaria) sp.	000	000	000	000	000	0+0	000	000
Psychodidae	000	+00	000	000	000	000	000	000
Pericoma exquisita	000	00+	000	000	000	000	000	000
Pericoma neglecta	00+	000	000	000	000	+0+	000	00+
Pericoma trivialis group	000	00+	+00	000	000	000	000	+0+
Ptychoptera sp.	000	000	000	000	000	0++	+++	000
Dixa maculata complex	000	0+0	000	000	000	000	0+0	000
Dixa nebulosa	0+0	0+0	000	000	000	000	000	0+0
Ceratopogonidae	+0+	+00	000	000	+00	+++	000	+00
Apsectrotanypus trifascipennis	+0+	000	000	000	000	+++	+00	+++
Macropelopia sp.	0++	0+0	000	000	000	+++	000	0++
Procladius sp.	000	0+0	000	000	0+0	+++	000	0+0
Clinotanypus nervosus	000	000	000	000	+0+	000	000	000
Ablabesmyia sp.	000	000	0+0	000	000	000	000	000

Appendix C (contd)

	1	2	3	4	5	6	7	8
Conchapelopia sp.	000	000	000	000	000	000	000	+00
Monopelopia tenuicalcar	000	000	000	000	0+0	000	000	000
Paramerina sp.	000	+00	000	000	000	000	000	000
Thienemannimyia group	0+0	+00	000	000	000	+++	+00	0++
Zavrelimyia sp.	000	0+0	000	000	000	+00	000	000
Potthastia gaedii group	000	000	000	000	000	000	+00	000
Potthastia longimana group	0++	+0+	000	000	000	000	000	00+
Acricotopus lucens	000	000	000	+00	000	000	000	000
Brillia modesta	+00	000	000	000	000	+0+	+++	+0+
Cricotopus sp.	000	+00	000	000	000	000	000	000
Cricotopus (Isocladus) sp.	000	000	+++	000	00+	000	000	000
Eukiefferiella sp.	000	00+	000	000	000	000	000	000
Eukiefferiella claripennis	+00	000	000	000	000	000	000	000
Eukiefferiella ilkleyensis	000	+00	000	000	000	+00	000	000
Heterotrissocladus sp.	000	+00	000	000	000	+00	000	000
Orthocladus (Euorthocladus) thienemanni	000	+00	000	000	000	000	000	000
Paracladius conversus	+00	000	000	000	000	000	000	0+0
Psectrocladius (Allopsectrocladius) sp.	000	000	00+	000	000	000	000	000
Psectrocladius (Psectrocladius) sordidellus	000	000	00+	000	000	000	000	000
Rheocricotopus sp.	+00	00+	000	000	000	00+	00+	00+
Chaetocladus sp.	000	000	000	000	000	000	000	+00
Corynoneura sp.	000	000	00+	000	000	000	000	000
Epoicocladus flavens	000	000	000	000	000	00+	000	000
Limnophyes sp.	000	000	000	000	+00	000	000	000
Parakiefferiella sp.	000	000	000	000	000	0+0	000	000
Parametriocnemus stylatus	000	+00	000	000	000	0+0	+0+	00+
Paratrissocladus excerptus	000	000	000	000	000	+00	000	000
Thienemanniella sp.	000	000	000	000	000	000	000	+00
Cricotopus group	+00	+++	+00	000	+00	000	000	+00
Tvetenia sp.	000	000	000	000	000	000	000	00+
Tvetenia calvescens	0+0	+0+	000	000	000	+00	000	+00
Tvetenia discoloripes group	000	000	000	000	000	+0+	000	000
Prodiamesa olivacea	+++	0+0	000	000	000	+++	+00	0++
Odontomesa fulva	+00	000	000	000	000	0+0	000	0+0
Chironomus sp.	000	000	0+0	00+	0+0	000	000	000
Cryptochironomus sp.	000	000	000	000	00+	000	000	000
Endochironomus sp.	000	000	+++	+++	+00	000	000	000
Glyptotendipes sp.	000	000	+++	+++	+++	000	000	000
Kiefferulus tendipediformis	000	000	000	+00	000	000	000	000
Dicrotendipes sp.	000	000	0+0	+00	000	000	000	000
Microtendipes sp.	000	000	+++	0++	0++	000	000	000
Parachironomus sp.	000	000	000	000	+00	000	000	000
Paracladopelma sp.	0+0	000	000	000	000	000	000	000
Paratendipes sp.	0+0	000	000	000	000	000	000	000
Polypedilum sp.	000	+00	0++	0+0	+00	0+0	+00	000
Cladotanytarsus sp.	00+	000	000	000	000	000	000	+00
Micropsectra sp.	+00	+00	000	000	000	+++	+00	+++
Paratanytarsus sp.	0+0	000	000	000	000	+0+	000	000
Tanytarsus sp.	+00	0+0	0+0	0+0	000	+++	000	0++
Tanytarsus brundini	0+0	+00	000	000	000	000	000	0+0
Rheotanytarsus sp.	000	000	000	000	000	000	000	0+0
Stempellina bausei	000	+00	000	000	000	000	000	000
Simulium (Nevermannia) costatum	000	+00	000	000	000	000	000	000
Simulium (Nevermannia) angustitarse group	0+0	0+0	000	000	000	+00	+++	000
Simulium (Eusimulium) aureum group	000	0++	000	000	000	000	000	0+0
Simulium (Simulium) noelleri	000	+00	000	000	000	000	000	000
Simulium (Boophthora) erythrocephalum	000	0+0	000	000	000	000	000	000
Simulium (Simulium) ornatum group	+00	000	000	000	000	+00	000	+++
Oxycera sp.	+00	000	000	000	000	000	000	000
Chelifera group	+++	000	000	000	000	+00	+00	000
Hemerodromia group	000	+0+	000	000	000	000	000	000
Atalanta group	000	000	000	000	000	000	0+0	00+
Limnophora sp.	000	+0+	000	000	000	+++	000	000

Appendix D Full taxon lists for each new site sampled by Northumbria and Yorkshire region.
The three columns for each site represent spring, summer and autumn.
+ = taxon present and 0 = taxon absent from sample.

1 R. TILL	CHATTON	11 MAY 1990 19 JUL 1990 24 OCT 1990
2 R. TILL	ETAL	05 MAR 1990 20 JUN 1990 14 OCT 1990
3 R. GLEN	EWART	05 MAR 1990 04 JUN 1990 04 OCT 1990
4 GLANTON BURN	ROTHILL	08 MAR 1990 14 JUN 1990 05 OCT 1990
5 GATE BURN	FRAMLINGTON GATE	08 MAR 1990 02 JUL 1990 09 OCT 1990
6 KILTON BECK	LODGE WOOD	16 MAR 1990 09 AUG 1990 12 OCT 1990
7 R. BALDER	U/S BALDERHEAD RESERVOIR	16 MAY 1990 17 JUL 1990 14 OCT 1990
8 COLLEGE BURN	HETHPOOL	05 MAR 1990 04 JUN 1990 04 OCT 1990
9 HARTHORPE BURN	CORONATION WOOD	06 MAR 1990 22 JUN 1990 12 OCT 1990

	1	2	3	4	5	6	7	8	9
Hydridae	000	000	000	0+0	000	0+0	000	000	000
Polycelis nigra group	000	+++	++0	00+	000	000	000	000	000
Polycelis felina	000	0++	000	0+0	000	000	000	000	000
Crenobia alpina	000	000	000	000	000	0+0	000	000	0+0
Potamopyrgus jenkinsi	000	0++	0++	+++	000	+++	000	000	000
Lymnaea sp.	000	000	000	000	000	+00	000	000	000
Lymnaea peregra	000	+++	+0+	+0+	0++	00+	000	+++	+++
Physa sp.	000	0+0	000	000	000	000	000	000	000
Physa fontinalis	000	00+	000	000	000	000	000	000	000
Gyraulus albus	000	00+	000	000	000	000	000	000	000
Ancylus fluviatilis	000	0++	+++	+++	000	+++	000	+++	+0+
Succinea sp.	+00	000	000	000	000	000	000	000	000
Sphaerium corneum	000	+0+	000	000	000	000	000	000	000
Pisidium sp.	+00	000	000	0+0	+00	000	000	000	000
Pisidium amnicum	00+	+00	000	000	000	000	000	000	000
Pisidium casertanum	000	000	000	000	000	0+0	000	000	000
Pisidium personatum	000	000	000	+00	000	+0+	000	000	000
Pisidium subtruncatum	0+0	0++	000	000	000	000	000	000	000
Pisidium nitidum	000	+00	000	000	000	000	000	000	000
Chaetogaster diaphanus	000	00+	000	000	000	000	000	000	000
Nais communis group	000	000	0+0	00+	000	0+0	000	0+0	000
Nais simplex	000	000	000	000	000	000	000	000	00+
Nais alpina	000	000	000	000	000	000	0++	+00	000
Nais barbata	000	000	0+0	000	000	000	000	000	000
Nais elinguis	000	000	000	000	00+	+00	000	0+0	000
Nais bretscheri	000	000	0+0	000	00+	000	000	000	0+0
Nais pardalis	000	000	000	000	000	000	000	0+0	000
Stylaria lacustris	000	00+	00+	000	000	000	000	000	000
Pristina idrensis	000	000	000	000	000	0+0	000	000	000
Tubificidae	+0+	00+	000	+00	000	00+	000	000	000
Tubifex tubifex	000	000	000	000	000	+00	000	000	000
Limnodrilus claparedeianus	00+	000	000	000	000	000	000	000	000
Limnodrilus hoffmeisteri	00+	000	+00	00+	0+0	000	000	000	000
Rhyacodrilus coccineus	000	+00	+00	00+	000	+00	000	000	000
Aulodrilus plurisetia	+0+	+0+	000	00+	00+	+00	000	000	000
Enchytraeus group	000	+00	+++	000	000	+00	+00	0++	+++
Lumbriculus variegatus group	+00	0++	000	00+	000	00+	0++	0++	000
Stylodrilus sp.	00+	+0+	000	+00	+++	0+0	000	000	000
Stylodrilus heringianus	+00	0+0	+++	000	000	+00	+0+	00+	00+
Eiseniella tetraedra	000	000	+0+	000	000	000	+00	0+0	000
Piscicola geometra	00+	000	000	000	000	000	000	000	000
Glossiphonia complanata	+0+	00+	00+	+0+	000	000	000	000	000
Helobdella stagnalis	000	+++	+++	000	000	000	000	000	000
Erpobdella octoculata	+0+	+++	+++	000	000	000	000	000	000
Hydracarina	0+0	+++	+++	+++	+++	+++	000	0++	+0+
Asellus aquaticus	000	+++	+++	000	000	000	000	000	000
Asellus meridianus	000	+00	000	000	000	000	000	000	000
Gammarus pulex	+0+	0++	+++	+++	+++	000	000	+++	+++
Baetis scambus group	+00	0++	0++	000	0+0	000	+00	0++	0+0
Baetis vernus	000	000	000	000	0+0	000	+00	000	000
Baetis rhodani	+00	+++	+++	+0+	+++	+++	0++	+++	+++
Baetis muticus	000	000	000	000	+0+	000	0+0	000	000
Centroptilum luteolum	+00	000	000	000	00+	000	000	000	000
Rhithrogena semicolorata group	000	+00	+00	+00	+++	+00	000	00+	+++
Heptagenia sulphurea	000	+++	+00	000	000	000	000	000	000

Appendix D (contd)

	1	2	3	4	5	6	7	8	9
Heptagenia lateralis	000	000	000	000	+00	+00	+++	000	000
Ecdyonurus sp.	000	0+0	+0+	0++	+++	++0	0++	+0+	+++
Paraleptophlebia sp.	000	000	000	+00	000	00+	000	000	000
Paraleptophlebia submarginata	000	00+	000	00+	000	000	000	000	00+
Paraleptophlebia cincta	000	000	000	000	000	+00	00+	000	000
Habrophlebia fusca	000	000	000	+00	000	000	000	000	000
Ephemerella ignita	+00	0+0	0++	0+0	0+0	0+0	000	00+	0+0
Ephemerella notata	+00	+00	000	000	000	000	000	000	000
Ephemerella danica	+00	000	000	000	+++	++0	000	000	000
Brachycercus harrisella	+00	00+	000	000	000	000	000	000	000
Caenis luctuosa group	000	00+	000	000	000	000	000	000	000
Caenis rivulorum	0+0	+0+	0+0	000	000	000	+00	000	0+0
Caenis pseudorivulorum group	000	0++	000	000	000	000	000	000	000
Taeniopteryx nebulosa	00+	00+	000	00+	000	000	00+	000	000
Brachyptera risi	000	000	000	000	+00	+00	000	000	+00
Protonemura sp.	000	000	000	000	00+	000	000	000	000
Protonemura praecox	000	000	000	000	000	00+	000	00+	000
Protonemura meyeri	000	000	000	000	+00	00+	00+	000	00+
Amphinemura standfussi	000	000	000	000	000	000	0+0	000	000
Amphinemura sulcicollis	000	000	000	000	+0+	000	+0+	+00	+++
Nemoura avicularis	00+	+00	000	+0+	00+	0++	000	000	000
Nemoura cambrica group	000	000	000	+00	000	++0	000	000	000
Leuctra sp.	000	000	000	000	000	000	000	000	00+
Leuctra geniculata	000	0+0	000	000	0+0	000	000	000	000
Leuctra inermis	000	000	000	000	+00	+00	+0+	000	+00
Leuctra hippopus	000	000	000	000	0++	+00	00+	000	000
Leuctra fusca	000	0+0	0+0	000	000	0++	+00	000	0+0
Capnia bifrons	000	000	000	000	000	+00	000	000	000
Perlodes microcephala	000	000	+0+	000	+0+	000	0++	+0+	00+
Isoperla grammatica	000	000	+00	000	+++	+0+	000	+00	+00
Dinocras cephalotes	000	+0+	000	000	000	000	000	000	0++
Chloroperla torrentium	000	000	000	000	+00	+00	+00	000	000
Chloroperla tripunctata	000	000	000	000	000	000	000	000	+++
Velia caprai	+00	000	000	000	000	000	000	000	000
Corixidae	0+0	000	000	000	000	000	000	000	000
Micronecta sp.	000	000	000	000	000	000	000	000	00+
Sigara (Sigara) sp.	+0+	000	000	000	000	000	000	000	000
Halimulus sp.	000	00+	000	0+0	000	000	000	000	000
Potamonectes depressus	0+0	0++	000	000	000	000	000	000	000
Oreodytes sanmarkii	000	0+0	000	+++	+00	0+0	0+0	000	0++
Oreodytes septentrionalis	000	000	000	000	000	000	000	000	0+0
Platambus maculatus	00+	00+	00+	0++	000	000	000	000	000
Orectochilus villosus	00+	+0+	+0+	000	000	000	000	000	000
Hydrophilidae (incl. Hydraenidae)	000	000	000	000	000	000	000	000	00+
Hydraena gracilis	000	+00	000	000	0+0	+++	000	000	+00
Helophorus arvernensis	000	000	000	+00	000	000	000	000	000
Helophorus brevipalpis	0+0	000	000	000	0+0	0++	000	000	000
Elodes sp.	000	000	000	+++	+0+	+++	000	000	000
Elmis aenea	+++	+++	++0	+++	+++	+++	0++	0+0	0++
Esolus parallelepipedus	00+	+++	0++	00+	00+	000	0++	00+	+++
Limnius volckmari	+00	+++	+++	000	+00	+++	+++	+00	0+0
Oulimnius sp.	+0+	000	0+0	000	+00	000	000	00+	000
Oulimnius tuberculatus	000	+++	000	000	000	000	0++	000	000
Riolus subviolaceus	000	+00	000	000	000	000	000	000	000
Sialis lutaria	000	000	000	00+	000	000	000	000	000
Sialis fuliginosa	000	000	000	+0+	00+	+00	000	000	000
Rhyacophila sp.	000	000	000	000	000	00+	000	000	000
Rhyacophila dorsalis	000	0+0	0++	000	+++	++0	+++	0++	+++
Rhyacophila septentrionalis	000	000	000	+00	000	000	000	000	000
Rhyacophila oblitterata	000	000	000	000	0+0	000	0+0	000	0+0
Rhyacophila munda	000	000	000	000	000	000	000	000	0+0
Glossosoma sp.	000	00+	000	000	000	000	000	000	000
Plectrocnemia conspersa	000	000	000	+00	0+0	+00	+00	000	000
Polycentropus flavomaculatus	+0+	000	0++	000	+00	000	0++	+++	+++
Polycentropus kingi	000	000	000	000	000	000	000	000	0+0
Lype sp.	000	000	000	00+	000	000	000	000	000
Hydropsyche pellucidula	00+	+00	+00	000	+00	000	00+	00+	00+
Hydropsyche angustipennis	000	000	000	00+	000	000	000	000	000
Hydropsyche contubernalis	000	00+	000	000	000	000	000	000	000
Hydropsyche instabilis	000	000	000	000	000	+0+	000	000	++0
Hydropsyche siltalai	+0+	+++	+++	000	0++	000	+0+	+0+	+++
Hydroptila sp.	00+	0++	000	000	000	000	00+	000	000
Limnephilidae	000	000	000	000	000	000	0+0	000	00+
Drusus annulatus	000	000	+00	+00	+00	+00	+00	+00	000
Ecclisopteryx guttulata	000	000	000	000	000	000	00+	+0+	+0+
Limnephilus sp.	000	000	000	00+	000	000	000	000	000
Limnephilus lunatus group	000	000	000	0+0	000	000	000	000	000
Limnephilus extricatus	000	000	000	+0+	000	000	000	000	000
Anabolia nervosa	+00	+00	000	000	000	000	000	000	000
Potamophylax group	000	000	000	000	+00	000	000	000	000
Potamophylax cingulatus group	000	000	000	0+0	00+	000	000	000	000
Halesus sp.	000	000	000	0+0	+00	000	000	000	000

Appendix D (contd)

	1	2	3	4	5	6	7	8	9
Halesus radiatus	000	000	000	+00	000	000	000	000	000
Chaetopteryx villosa	+00	000	000	000	000	000	000	000	0+0
Odontocerum albicorne	000	000	000	000	0++	000	000	000	000
Athripsodes sp.	000	00+	000	000	000	000	000	000	000
Athripsodes cinereus	+++	+00	000	000	000	000	000	000	000
Athripsodes albifrons	000	0+0	0+0	000	000	000	000	000	000
Ceraclea annulicornis	000	00+	000	000	000	000	000	000	000
Ceraclea dissimilis	+00	000	0+0	000	000	000	000	000	000
Lepidostoma hirtum	+0+	+++	+++	000	000	000	00+	000	000
Sericostoma personatum	+00	000	0+0	000	+++	000	000	00+	+++
Tipula sp.	000	000	000	000	000	000	+00	000	000
Tipula montium group	00+	00+	00+	+0+	000	00+	00+	+++	000
Antocha vitripennis	000	+00	000	000	000	000	000	000	000
Dicranota sp.	0++	0++	+++	+00	+++	+++	00+	0+0	+++
Limnophila (Eloeophila) sp.	000	000	000	000	0+0	000	+00	000	000
Hexatoma sp.	+++	+00	000	000	000	000	000	000	+00
Psychodidae	000	000	000	000	000	+00	000	000	000
Pericoma blandula	000	000	000	+00	000	000	000	000	000
Pericoma exquisita	000	00+	000	000	000	000	000	000	000
Pericoma fallax	000	000	000	000	000	+00	000	000	000
Pericoma neglecta	000	000	000	0+0	000	+++	000	000	000
Pericoma pseudoexquisita	000	000	000	00+	000	000	000	000	000
Pericoma trivialis group	000	000	000	00+	000	+00	000	000	000
Dixa nebulosa	000	000	000	000	00+	000	000	000	000
Dixa puberula	000	000	000	000	00+	000	000	000	000
Ceratopogonidae	+00	+00	0++	00+	000	00+	000	0+0	000
Apsectrotanypus trifascipennis	000	000	000	00+	000	000	000	000	000
Macropelopia sp.	000	000	000	000	000	+00	000	000	000
Procladius sp.	000	000	000	00+	000	000	000	000	000
Ablabesmyia sp.	000	+00	000	000	000	000	000	000	000
Natarsia sp.	000	000	000	00+	000	000	000	000	000
Thienemannimyia group	+0+	0++	000	+++	000	+0+	0+0	000	0+0
Trissopelopia longimana	000	000	000	00+	00+	000	000	000	0+0
Diamesa sp.	000	+00	+00	000	000	000	0+0	00+	+0+
Potthastia gaedii group	+00	+00	000	000	000	000	+0+	000	000
Potthastia longimana group	00+	+00	00+	000	000	000	000	0+0	000
Brillia longifurca	000	+00	000	000	000	000	000	000	000
Brillia modesta	000	000	000	+00	+00	+00	000	0+0	0++
Cricotopus (Cricotopus) sp.	000	000	000	0+0	000	000	000	000	000
Cricotopus (Cricotopus) trifascia	000	000	0+0	000	000	000	000	0+0	000
Eukiefferiella sp.	000	00+	000	000	000	000	000	000	000
Eukiefferiella claripennis	000	000	000	000	0+0	000	0+0	000	000
Eukiefferiella clypeata	000	000	000	000	000	000	000	0+0	000
Eukiefferiella ilkleyensis	000	+00	0+0	000	000	000	000	0+0	000
Eukiefferiella minor	000	+00	000	000	00+	000	000	000	000
Heterotrissocladius sp.	000	000	000	000	000	+00	000	000	000
Orthocladius (Euorthocladius) thienemanni	000	+00	000	000	000	000	000	000	000
Rheocricotopus sp.	000	000	000	+00	0++	+00	000	000	000
Synorthocladius semivirens	000	000	00+	000	000	000	0+0	0+0	000
Corynoneura sp.	000	000	000	000	000	000	000	000	0+0
Epicoccladius flavens	000	000	000	000	00+	000	000	000	000
Gymnometriocnemus sp.	000	000	000	000	000	000	0+0	000	000
Parametriocnemus stylatus	000	000	000	+00	000	000	000	000	000
Paraphaenocladius sp.	000	000	000	000	000	0+0	000	000	000
Paratrissocladius excerptus	+00	000	000	000	000	000	000	000	000
Thienemanniella sp.	000	000	000	+00	000	000	000	000	000
Orthocladius lignicola	000	000	000	0+0	000	0+0	000	000	000
Cricotopus group	+00	+++	+++	+00	+++	+00	+00	0++	000
Tvetenia sp.	000	0++	000	000	000	0+0	0+0	000	000
Tvetenia calvescens	00+	+00	+++	0+0	0++	+00	000	+00	+00
Tvetenia discoloripes group	000	000	000	000	0+0	+0+	000	000	+++
Prodiamesa olivacea	+00	00+	000	00+	000	000	000	000	000
Odontomesa fulva	0+0	000	000	000	000	000	000	000	000
Cryptochironomus sp.	+00	000	000	000	000	000	000	000	000
Microtendipes sp.	+0+	+++	00+	0+0	000	000	00+	000	000
Paracladopelma sp.	+00	000	000	000	000	000	000	000	000
Paratendipes sp.	+00	000	00+	000	000	000	000	000	000
Polypedilum sp.	+00	0+0	0+0	000	0+0	000	000	0+0	0+0
Stictochironomus sp.	0++	000	000	000	000	000	000	000	000
Cladotanytarsus sp.	+00	000	000	000	000	000	000	000	000
Micropsectra sp.	000	+00	+++	+++	0++	+0+	000	+00	+00
Paratanytarsus sp.	+00	+00	0+0	000	000	000	00+	000	000
Tanytarsus sp.	000	000	0+0	0+0	000	000	000	0+0	0+0
Tanytarsus brundini	000	000	000	0+0	000	000	00+	000	0+0
Stempellina bausei	+00	000	000	000	000	000	000	000	000
Micropsectra group	+00	0++	000	000	000	0+0	000	000	000
Prosimulium hirtipes	000	000	000	000	000	+00	000	000	000
Simulium (Nevermannia) vernum group	000	000	000	000	+00	000	000	000	000
Simulium (Nevermannia) cryophilum group	000	000	000	+00	0++	+00	0+0	000	000
Simulium (Nevermannia) angustitarse group	000	000	000	+00	000	000	000	000	000
Simulium (Eusimulium) aureum group	00+	00+	000	000	000	0++	000	000	000
Simulium (Wilhelmia) sp.	000	+00	0+0	000	+00	000	000	000	000

Appendix D (contd)

	1	2	3	4	5	6	7	8	9
Simulium (Wilhelmia) equinum	000	00+	000	000	000	000	000	000	000
Simulium (Simulium) reptans group	+00	0+0	000	000	000	000	000	000	0+0
Simulium (Simulium) argyreatum group	000	000	000	000	+00	+++	+00	+0+	+00
Simulium (Simulium) variegatum	000	000	000	000	000	000	000	0+0	000
Simulium (Simulium) ornatum group	+00	+++	0+0	+00	000	000	000	0++	000
Empididae	000	000	000	000	000	000	000	000	0+0
Chelifera group	+00	000	000	+++	0+0	+00	000	000	000
Hemerodromia group	000	+00	0+0	000	000	000	000	000	000
Atalanta group	000	000	000	000	000	000	000	0+0	000
Wiedemannia group	000	0++	000	000	+++	+00	000	0+0	000
Dolichopodidae	000	000	0+0	000	000	000	000	000	000
Atherix ibis	+++	+0+	000	000	000	000	00+	000	000
Chrysops sp.	+00	000	000	000	000	000	000	000	000
Limnophora sp.	000	0++	00+	000	+00	000	000	000	000

Appendix E Full taxon lists for each new site sampled by North West region. The three columns for each site represent spring, summer and autumn.
 + = taxon present and 0 = taxon absent from sample.

1 R. LUNE	OLD TEBAY	23 APR 1990	31 JUL 1990	17 OCT 1990			
2 R. LUNE	RIGMADEN	02 APR 1990	07 AUG 1990	05 NOV 1990			
3 R. LUNE	FORGE WEAR	21 MAR 1990	23 JUL 1990	18 OCT 1990			
4 R. EDEN	APPLEBY	20 MAR 1990	02 AUG 1990	23 OCT 1990			
5 R. EDEN	TEMPLE SOWERBY	27 MAR 1990	02 AUG 1990	26 OCT 1990			
6 R. EDEN	WARWICK BRIDGE	29 MAR 1990	17 JUL 1990	22 OCT 1990			
7 R. WAVER	WAVER BRIDGE	12 MAR 1990	17 JUL 1990	18 OCT 1990			
		1	2	3	4	5	6
Hydridae		000	000	000	000	00+	000
Polycelis nigra group		000	000	000	+00	00+	0++
Dugesia tigrina		000	000	0++	000	000	000
Dendrocoelum lacteum		000	000	00+	000	00+	000
Theodoxus fluviatilis		000	000	00+	000	000	000
Valvata piscinalis		000	000	000	000	00+	000
Potamopyrgus jenkinsi		+++	0++	+++	+++	+++	+++
Lymnaea peregra		00+	000	0++	000	+0+	+++
Physa sp.		000	000	00+	000	000	000
Gyraulus albus		000	000	000	000	00+	000
Armiger crista		000	000	000	00+	+0+	0++
Hippeutis complanatus		000	000	000	000	000	00+
Ancylus fluviatilis		+++	+++	000	+++	00+	+++
Sphaerium corneum		000	000	0++	000	000	000
Pisidium sp.		000	000	000	0+0	+00	0+0
Pisidium casertanum		000	000	000	000	000	00+
Pisidium subtruncatum		000	000	000	00+	00+	0+0
Pisidium hibernicum		000	000	000	00+	000	000
Pisidium nitidum		000	000	000	00+	00+	000
Ophidonais serpentina		000	000	000	000	000	00+
Nais alpina		000	000	00+	000	000	000
Nais barbata		000	000	000	000	000	+00
Stylaria lacustris		000	000	0++	00+	000	00+
Tubificidae		000	00+	00+	00+	000	+0+
Tubifex ignotus		000	000	00+	000	000	000
Psammoryctides barbatus		000	000	0++	000	+++	000
Limnodrilus hoffmeisteri		000	000	+++	+00	+00	+00
Spirosperma ferox		000	0+0	000	+++	000	0+0
Rhyacodrilus coccineus		+00	+0+	+++	00+	000	+++
Aulodrilus plurisetia		000	000	00+	000	000	0+0
Enchytraeus group		000	+++	000	000	+++	+0+
Lumbriculus variegatus group		0+0	000	0++	000	+00	000
Stylocladus sp.		0+0	0+0	000	000	000	0+0
Stylocladus heringianus		+0+	+0+	+++	+00	+0+	00+
Lumbricidae		000	+0+	000	000	0+0	000
Eiseniella tetraedra		00+	000	000	000	00+	000
Pisicicola geometra		000	000	000	000	00+	000
Glossiphonia complanata		00+	000	0++	0++	00+	0++
Helobdella stagnalis		000	0+0	000	+++	+0+	+++
Erpobdellidae		000	000	000	000	0+0	000
Erpobdella octoculata		000	+++	00+	+++	+++	+++
Hydracarina		+00	+00	+00	+00	+00	+++
Asellus aquaticus		000	00+	00+	00+	+0+	+++
Crangonyx pseudogracilis		000	000	00+	000	000	000
Gammarus pulex		+++	0++	0+0	+++	+++	+++
Baetis scambus group		0++	0+0	0++	0++	0++	0+0
Baetis rhodani		+++	+++	+++	+++	+++	+++
Baetis muticus		0+0	0+0	+++	+00	+00	+00
Centroptilum luteolum		000	000	000	000	000	000
Rhithrogena semicolorata group		+0+	+0+	+0+	+0+	+++	+00
Heptagenia sp.		00+	000	000	000	000	000
Heptagenia sulphurea		+00	000	000	+++	+0+	000
Heptagenia lateralis		+00	000	000	+00	000	000
Ecdyonurus sp.		+++	+++	+++	+++	+++	+++
Paraleptophlebia sp.		00+	000	000	000	000	000
Paraleptophlebia submarginata		000	000	000	00+	000	000
Ephemerella ignita		0+0	0+0	0+0	0++	0++	0+0
Ephemerella notata		000	000	000	+00	+00	000
Caenis luctuosa group		000	000	00+	+0+	00+	+0+

Appendix E (contd)

	1	2	3	4	5	6	7
Caenis rivulorum	+0+	+0+	+++	+0+	+++	+++	+0+
Taeniopteryx nebulosa	000	000	000	00+	000	00+	000
Brachyptera risi	000	000	000	+00	+00	000	+00
Protonemura meyeri	00+	000	000	000	000	000	000
Amphinemura sp.	00+	000	000	000	000	000	000
Amphinemura sulcicollis	+00	+00	+00	+0+	00+	000	+00
Nemoura cinerea	000	000	000	000	000	000	+00
Nemoura avicularis	000	000	000	000	000	000	00+
Nemoura cambrica group	000	000	000	000	000	000	+00
Leuctra sp.	+00	000	000	000	000	000	000
Leuctra geniculata	000	000	000	0+0	0+0	+00	000
Leuctra inermis	+00	+00	+00	000	000	000	000
Leuctra fusca	0+0	+00	0+0	0++	0+0	0+0	0+0
Capnia sp.	000	000	000	000	000	000	+00
Perlodes microcephala	00+	0+0	0+0	0+0	0++	+++	000
Isoperla grammatica	+0+	+0+	+00	+00	+00	+0+	+00
Dinocras cephalotes	+00	00+	0++	0+0	000	000	000
Perla bipunctata	+00	+++	+00	+00	+00	00+	000
Chloroperla torrentium	+00	+0+	000	000	000	000	000
Chloroperla tripunctata	000	+00	000	000	000	000	000
Micronecta sp.	+00	000	000	000	000	000	000
Brychius elevatus	+00	000	000	000	0+0	000	000
Haliphus sp.	000	000	000	000	00+	000	0+0
Haliphus lineatocollis	000	000	000	000	000	000	00+
Potamonectes depressus	000	000	0+0	000	+00	000	0+0
Oreodytes sanmarkii	+00	+00	+00	000	0+0	0+0	000
Oreodytes septentrionalis	000	0+0	+00	000	000	000	000
Platambus maculatus	000	000	000	00+	000	00+	000
Gyrinidae	000	000	000	000	00+	000	000
Orectochilus villosus	+0+	+0+	00+	+00	+00	+0+	+00
Hydraena rufipes	000	000	000	000	000	000	00+
Hydraena gracilis	0++	+++	0+0	+00	+++	000	+++
Elmis aenea	+++	+0+	+++	+++	+++	+++	+++
Esolus parallelepipedus	+++	+++	+++	+++	+++	+++	+++
Limnius volckmari	+++	+++	+++	+++	+++	+++	+++
Oulimnius sp.	00+	000	00+	00+	000	000	000
Oulimnius tuberculatus	+00	0+0	0+0	+00	+0+	+++	+0+
Riolus subviolaceus	0+0	000	000	000	000	000	0+0
Rhyacophila dorsalis	+++	0++	+++	+00	+++	+++	+00
Glossosoma sp.	000	+++	000	000	00+	00+	000
Agapetus sp.	000	00+	000	+00	+++	+++	000
Polycentropus sp.	+00	000	000	000	000	000	000
Polycentropus flavomaculatus	0++	000	0++	+++	+++	00+	00+
Psychomyia pusilla	+00	000	000	000	000	000	000
Hydropsyche sp.	0+0	000	000	000	000	000	0+0
Hydropsyche pellucidula	00+	+00	000	+00	0++	0+0	+0+
Hydropsyche contubernalis	000	000	000	000	000	000	000
Hydropsyche instabilis	00+	000	000	000	000	000	000
Hydropsyche siltalai	+0+	+++	+00	+++	+0+	+0+	+++
Cheumatopsyche lepida	000	000	000	000	00+	+00	000
Hydroptila sp.	000	000	0+0	000	000	000	0+0
Limnephilidae	000	000	000	000	000	00+	000
Athripsodes sp.	000	+0+	+00	+0+	+00	+00	000
Athripsodes cinereus	000	000	00+	0+0	000	000	000
Athripsodes albifrons	000	0+0	000	0+0	000	0++	000
Mystacides azurea	00+	000	00+	000	000	00+	000
Lepidostoma hirtum	00+	+0+	+0+	+++	+0+	+++	000
Sericostoma personatum	00+	+00	000	000	000	0++	+00
Tipulidae	000	000	+00	000	000	000	000
Tipula montium group	0++	0++	0++	00+	+0+	00+	+++
Antocha vitripennis	000	000	000	000	000	+00	000
Dicranota sp.	0+0	00+	+++	000	+++	+++	0+0
Pericoma sp.	000	000	000	000	000	000	+0+
Pericoma exquisita	000	000	000	+0+	00+	000	0+0
Pericoma neglecta	000	000	000	000	000	000	0+0
Ceratopogonidae	+00	+0+	+00	+00	+00	+00	+00
Ablabesmyia sp.	000	000	0+0	000	000	000	000
Conchapelopia sp.	0+0	000	0+0	000	000	000	000
Thienemannimyia group	+0+	0+0	000	0+0	+++	0++	+++
Diamesa sp.	+00	000	000	+00	000	000	+00
Potthastia longimana group	000	00+	+00	+00	+0+	+0+	+++
Cardiocladius sp.	0+0	000	000	000	000	000	000
Cricotopus (Cricotopus) sp.	000	000	000	000	000	000	0+0
Cricotopus (Cricotopus) trifascia	0+0	000	000	00+	000	000	0+0
Cricotopus (Isocladius) sp.	000	000	000	000	000	000	0+0
Eukiefferiella sp.	0+0	+00	000	000	0++	000	+0+
Eukiefferiella clypeata	000	000	000	000	000	+00	000
Eukiefferiella ilkleyensis	000	000	000	+00	000	+00	0+0
Eukiefferiella gracei	000	000	000	+00	000	000	000
Eukiefferiella minor	000	000	000	+00	000	000	000
Nanocladius sp.	000	000	000	000	0+0	000	000
Orthocladius (Euorthocladius) rivulorum	+00	000	000	000	000	000	000

Appendix E (contd)

	1	2	3	4	5	6	7
Orthocladus (Euorthocladus) thienemanni	+00	000	000	+00	+00	000	000
Orthocladus (Eudactylocladius) sp.	0+0	000	000	000	000	000	000
Paratrachocladus sp.	+00	000	000	+00	000	000	000
Rheocricotopus sp.	+00	000	000	000	0+0	000	000
Synorthocladus semivirens	000	000	0+0	+0+	0+0	000	000
Parametriocnemus stylatus	000	000	000	000	000	+00	000
Cricotopus group	+++	+00	000	+++	+00	+00	+00
Tvetenia sp.	000	+++	00+	000	000	000	+0+
Tvetenia calvescens	0++	000	+00	+++	+00	+00	0+0
Tvetenia discoloripes group	0+0	000	+00	000	+00	+00	000
Microtendipes sp.	00+	00+	0++	00+	+0+	00+	000
Paratendipes sp.	000	000	0+0	0+0	000	000	0+0
Polypedilum sp.	+00	+00	0+0	+00	+00	0+0	000
Stictochironomus sp.	000	000	+00	000	+00	000	000
Cladotanytarsus sp.	000	000	000	000	000	0+0	000
Microsectra sp.	0++	000	000	+0+	+00	00+	0+0
Paratanytarsus sp.	000	000	000	000	000	000	0++
Tanytarsus sp.	000	000	0+0	000	000	0+0	0+0
Tanytarsus brundini	0+0	000	000	000	000	000	0+0
Rheotanytarsus sp.	+00	+00	+00	0+0	000	+00	0+0
Microsectra group	000	+00	000	000	0+0	000	+00
Simulium (Eusimulium) aureum group	0+0	000	000	0+0	00+	0+0	0+0
Simulium (Wilhelmia) sp.	000	00+	000	+++	+++	0+0	0++
Simulium (Wilhelmia) equinum	000	000	000	000	000	+00	000
Simulium (Simulium) reptans group	0+0	0+0	0++	0+0	0+0	+00	000
Simulium (Simulium) noelleri	000	000	000	000	+00	000	000
Simulium (Simulium) argyreatum group	0+0	000	000	000	000	000	+00
Simulium (Simulium) ornatum group	0+0	000	000	+++	+++	0++	+++
Chelifera group	000	000	+00	000	0+0	000	+00
Hemerodromia group	000	000	000	000	+00	000	000
Atalanta group	000	000	000	000	000	000	0+0
Wiedemannia group	+00	000	000	000	000	000	+00
Atherix ibis	000	+++	0+0	000	0++	+00	0+0
Limnophora sp.	000	000	000	+0+	+00	000	+++

Appendix F Full taxon lists for each new site sampled by Severn Trent region. The three columns for each site represent spring, summer and autumn.
 + = taxon present and 0 = taxon absent from sample.

1 R. SEVERN	LLANDINAM	30 APR 1990 06 AUG 1993 24 OCT 1990
2 R. SEVERN	ISLE OF BICTON	22 MAR 1990 23 AUG 1990 09 NOV 1990
3 SHER BROOK	SHUGBOROUGH	04 APR 1990 26 AUG 1992 16 OCT 1990
4 BRADGATE BROOK	NEWTON LINFORD	17 APR 1990 18 JUL 1990 29 OCT 1990
5 R. DERWENT	BASLOW	17 MAY 1990 22 AUG 1990 18 NOV 1990
6 R. DERWENT	CROMFORD MEADOWS	22 APR 1990 13 AUG 1992 08 JAN 1993
7 R. WYE (TRIB OF DERWENT)	ASHFORD	26 APR 1990 01 AUG 1990 05 NOV 1990

	1	2	3	4	5	6	7
Spongillidae	000	000	++0	000	000	000	000
Polycelis felina	000	000	000	000	000	000	+00
Dugesia tigrina	000	0++	000	000	000	000	000
Potamopyrgus jenkinsi	000	+++	000	+++	0++	000	0++
Lymnaea sp.	000	00+	000	000	000	000	000
Lymnaea peregra	000	000	0++	+++	+00	+++	+++
Gyraulus albus	000	00+	00+	000	000	000	000
Armiger crista	000	000	000	000	00+	000	000
Ancylus fluviatilis	0+0	+++	+++	+++	+00	+++	+++
Sphaerium corneum	000	+++	000	000	00+	+++	000
Pisidium sp.	0+0	000	+0+	+00	00+	000	000
Pisidium casertanum	000	000	0+0	00+	+00	0++	00+
Pisidium personatum	000	000	000	000	000	+00	000
Pisidium subtruncatum	000	000	0+0	000	000	+++	000
Pisidium nitidum	000	000	000	000	000	0++	+00
Nais communis group	000	000	00+	000	000	000	000
Nais alpina	000	000	000	000	000	00+	000
Nais elinguis	000	000	000	000	+00	000	000
Slavina appendiculata	000	00+	000	000	000	000	000
Tubificidae	000	0+0	00+	0+0	00+	000	00+
Tubifex tubifex	000	000	000	000	000	00+	000
Psammoryctides barbatus	000	+++	000	+0+	000	000	000
Limnodrilus hoffmeisteri	000	000	000	+0+	00+	0++	+00
Potamothenix hammoniensis	000	000	000	+0+	000	000	000
Rhyacodrilus coccineus	000	+0+	000	+00	000	+00	+0+
Enchytraeus group	0++	000	00+	000	+0+	000	+00
Lumbriculus variegatus group	+00	0++	000	+00	+00	000	000
Stylocyrtus sp.	+00	000	000	000	+0+	000	00+
Stylocyrtus heringianus	0+0	+++	000	+0+	0+0	+0+	+00
Lumbricidae	+00	+00	000	000	+0+	+++	+++
Eiseniella tetraedra	0+0	000	00+	000	000	000	000
Pisicicola geometra	000	000	000	000	0+0	0++	00+
Glossiphonia heteroclita	000	000	000	000	000	00+	000
Glossiphonia complanata	0+0	00+	000	+++	000	+++	0++
Helobdella stagnalis	0+0	000	000	0++	000	00+	000
Erpobdella octoculata	000	+00	000	+0+	000	+00	000
Dina lineata	000	000	00+	000	000	000	000
Hydracarina	+00	+++	000	+00	+++	+++	+++
Asellus aquaticus	000	00+	+00	0++	000	00+	000
Gammarus pulex	000	+++	+++	+++	+++	+++	+++
Astacidae	000	000	+00	+0+	+0+	000	000
Austropotamobius pallipes	000	000	00+	0+0	000	0+0	00+
Baetis scambus group	000	0+0	000	000	+00	0+0	0+0
Baetis vernus	000	000	0+0	000	+00	0+0	000
Baetis buceratus	000	0+0	000	000	000	000	000
Baetis rhodani	+++	000	+++	+0+	+++	+++	+0+
Baetis muticus	000	000	0+0	000	000	+00	000
Centroptilum luteolum	000	000	000	+0+	000	0+0	000
Heptageniidae	000	000	000	0+0	000	000	000
Rhithrogena semicolorata group	+++	000	00+	+00	+00	+0+	+00
Heptagenia sulphurea	000	0++	000	000	+0+	+++	000
Heptagenia lateralis	+00	000	000	000	000	000	000
Ecdyonurus sp.	+00	000	0++	+0+	+++	+++	0+0
Paraleptophlebia sp.	000	000	000	000	000	000	+00
Paraleptophlebia submarginata	000	000	000	+0+	+0+	0++	00+
Habrophlebia fusca	000	000	000	+00	000	000	000
Ephemerella ignita	+00	000	0+0	0+0	+++	0++	0+0
Ephemerella danica	000	+++	+00	+++	+++	+++	+++
Caenis luctuosa group	000	00+	000	+++	000	000	000

Appendix F (contd)

	1	2	3	4	5	6	7
Caenis rivulorum	+00	+00	000	+++	+++	+++	+0+
Taeniopteryx nebulosa	000	000	000	000	000	00+	000
Brachyptera risi	+00	000	000	000	000	000	000
Protonemura sp.	0+0	000	000	000	0+0	000	000
Nemoura sp.	+00	000	000	000	000	000	000
Nemoura cambrica group	000	000	+00	000	000	000	000
Leuctra sp.	000	000	000	+00	000	000	000
Leuctra geniculata	000	0+0	000	000	+00	0+0	000
Leuctra hippopus	+0+	000	+0+	00+	000	000	000
Leuctra fusca	0+0	0+0	0+0	0+0	+0+	0+0	0+0
Perlodes microcephala	00+	000	000	000	000	000	000
Isoperla grammatica	+00	+00	+0+	+00	+0+	+0+	+0+
Dinocras cephalotes	000	000	000	000	000	000	+00
Perla bipunctata	+++	000	000	000	000	000	000
Chloroperla torrentium	+00	000	+00	+00	000	000	000
Chloroperla tripunctata	+0+	000	000	000	000	000	000
Velia sp.	000	000	000	0+0	000	000	000
Aphelocheirus aestivalis	000	+++	000	000	000	000	000
Sigara (Sigara) sp.	000	000	00+	000	000	000	000
Brychius elevatus	000	000	000	000	000	00+	000
Haliplus lineatocollis	000	000	00+	000	000	000	000
Oreodytes sanmarkii	000	000	000	+00	+00	000	000
Oreodytes septentrionalis	0+0	000	000	000	000	000	000
Platambus maculatus	000	000	000	00+	000	000	000
Orectochilus villosus	000	+++	000	+0+	00+	+0+	000
Hydraena gracilis	0+0	000	000	000	0+0	000	000
Elodes sp.	000	000	+0+	000	000	000	000
Elmis aenea	+00	0+0	+++	+++	+++	+++	+++
Esolus parallelepipedus	+++	+++	000	000	00+	+++	000
Limnius volckmari	+++	+++	00+	000	+++	+++	+00
Macronychus quadrituberculatus	000	+00	000	000	000	000	000
Oulimnius sp.	000	000	000	000	000	+++	000
Oulimnius tuberculatus	0+0	+++	000	+++	000	000	000
Riolus subviolaceus	000	000	000	000	000	0+0	0+0
Sisyra sp.	000	000	000	000	0+0	000	000
Rhyacophila dorsalis	+++	000	+++	+++	+++	+++	+++
Rhyacophila munda	0+0	000	000	000	000	000	0+0
Glossosoma sp.	0++	000	000	000	00+	000	0+0
Agapetus sp.	+00	000	+++	+0+	+0+	+++	+0+
Polycentropus sp.	000	000	000	000	000	000	0+0
Polycentropus flavomaculatus	+0+	000	000	+++	+++	+++	+0+
Polycentropus irroratus	000	000	000	+00	000	000	000
Lype sp.	000	000	00+	000	000	000	000
Psychomyia pusilla	000	000	000	000	+0+	000	+00
Hydropsyche pellucidula	+++	+++	+0+	+00	+++	+++	00+
Hydropsyche angustipennis	000	000	+00	000	000	000	000
Hydropsyche contubernalis	000	+++	000	000	000	000	000
Hydropsyche instabilis	000	000	+0+	000	000	000	+00
Hydropsyche siltalai	00+	000	000	+++	+++	+0+	+0+
Cheumatopsyche lepida	000	+++	000	000	000	000	000
Allotrichia pallicornis	000	000	000	000	+00	000	000
Hydroptila sp.	000	000	000	000	0+0	000	000
Ithytrichia sp.	000	000	000	+00	000	+0+	000
Ecclisopteryx guttulata	+++	000	000	000	000	000	+0+
Limnephilus sp.	000	000	00+	000	000	000	000
Limnephilus rhombicus	000	000	+00	000	000	000	000
Limnephilus lunatus group	000	000	+00	000	000	000	000
Anabolia nervosa	0+0	000	000	000	000	000	000
Potamophylax sp.	000	000	000	00+	000	000	000
Potamophylax cingulatus group	000	000	000	000	000	00+	000
Potamophylax latipennis	000	000	000	000	+00	+00	0+0
Potamophylax cingulatus	000	000	0+0	000	000	000	000
Halesus sp.	000	000	000	+00	000	000	000
Halesus radiatus	000	000	000	000	000	+0+	000
Halesus digitatus	000	000	000	000	000	000	+00
Hydatophylax infumatus	000	000	00+	000	000	000	000
Chaetopteryx villosa	000	000	000	+00	000	000	000
Athripsodes cinereus	000	00+	0+0	+00	00+	+++	000
Athripsodes albifrons	000	000	000	000	+++	+++	+++
Athripsodes bilineatus	000	000	000	00+	+0+	000	000
Mystacides azurea	000	000	000	+0+	+00	0++	000
Ceraclea sp.	000	000	000	000	000	0+0	000
Ceraclea nigronevosa	000	000	000	000	0+0	0+0	000
Ceraclea annulicornis	000	000	000	000	00+	+0+	000
Ceraclea dissimilis	000	000	000	000	+00	000	+00
Goera pilosa	000	0+0	00+	000	000	0+0	000
Silo pallipes	000	000	+++	+0+	000	000	+00
Lepidostoma hirtum	+0+	+++	000	+++	+0+	+++	+0+
Brachycentrus subnubilus	00+	+++	000	000	000	000	000
Sericostoma personatum	+++	000	0+0	+0+	+0+	+++	000
Tipula montium group	000	+00	00+	0++	000	000	000
Antocha vitripennis	000	000	000	000	+0+	+++	+00

Appendix F (contd)

	1	2	3	4	5	6	7
Dicranota sp.	+++	000	0+0	+++	+0+	00+	+0+
Linnophila (Eloeophila) sp.	000	000	000	+0+	000	000	+00
Hexatoma sp.	+++	000	000	000	000	000	000
Pericoma fallax	000	000	000	+00	000	000	000
Dixa maculata complex	000	000	0+0	000	000	000	000
Ceratopogonidae	+00	00+	000	+++	+00	+++	+0+
Apsectrotanypus trifascipennis	000	000	000	0+0	000	000	000
Macropelopia sp.	000	000	000	0+0	000	000	0+0
Procladius sp.	000	000	000	0+0	000	000	000
Ablabesmyia sp.	000	000	000	000	000	0+0	000
Conchapelopia sp.	000	000	000	000	000	0+0	000
Thienemannimyia group	00+	000	00+	+++	0+0	00+	+0+
Thienemannimyia sp.	000	000	000	000	000	000	0+0
Zavrelimyia sp.	000	000	000	0+0	000	000	000
Potthastia longimana group	+++	0+0	000	000	0++	00+	000
Brillia modesta	000	000	0+0	0++	00+	+0+	000
Cricotopus sp.	000	000	000	000	000	000	+00
Cricotopus (Cricotopus) trifascia	000	000	000	000	0+0	000	000
Cricotopus (Isocladius) sp.	000	000	000	000	000	000	0+0
Eukiefferiella sp.	000	000	000	000	000	00+	000
Eukiefferiella claripennis	000	000	000	000	+00	+00	000
Eukiefferiella clypeata	0++	000	000	000	000	000	000
Eukiefferiella ilkleyensis	000	000	00+	000	+00	+00	0+0
Eukiefferiella minor	000	000	000	000	000	+00	000
Nanocladius rectinervis	000	000	000	000	000	+00	000
Orthocladius (Euorthocladius) rivulorum	000	000	000	000	000	000	+00
Paratrachocladius sp.	000	000	000	000	+00	000	000
Rheocricotopus sp.	000	0+0	000	+00	0+0	+00	000
Synorthocladius semivirens	000	000	000	000	+00	000	0+0
Epoicocladius flavens	000	00+	000	000	0+0	+00	000
Heleniella ornaticollis	+00	000	000	000	000	000	000
Metriocnemus sp.	000	000	000	000	+00	000	000
Parametriocnemus stylatus	000	000	000	00+	00+	000	000
Paratrissocladius excerptus	000	000	000	+00	000	000	000
Cricotopus group	+00	000	00+	+00	+0+	+00	+++
Tvetenia sp.	000	+0+	000	0+0	000	00+	000
Tvetenia calvescens	0+0	000	00+	000	+++	+00	00+
Tvetenia discoloripes group	0+0	000	000	000	000	000	000
Prodiamesa olivacea	000	000	0+0	0++	000	000	00+
Demicryptochironomus vulneratus	000	000	000	000	+00	000	+00
Endochironomus sp.	000	000	00+	000	000	000	000
Glyptotendipes sp.	000	000	00+	000	000	000	000
Microtendipes sp.	000	+++	00+	+++	00+	0++	00+
Polypedilum sp.	0+0	000	+00	+++	+++	+00	+00
Stictochironomus sp.	000	0+0	000	000	000	000	+00
Xenochironomus xenolabis	000	000	0+0	000	0+0	000	000
Micropsectra sp.	000	000	000	+0+	+00	0+0	+0+
Paratanytarsus sp.	000	000	000	000	0++	000	0++
Tanytarsus sp.	000	000	000	+00	00+	000	0+0
Tanytarsus brundini	000	0+0	000	+00	0+0	0+0	000
Rheotanytarsus sp.	+00	0+0	+00	000	00+	000	000
Stempellina bausei	000	000	0+0	000	000	000	000
Virgatanytarsus sp.	000	0+0	000	000	000	000	000
Micropsectra group	+00	000	000	000	000	00+	000
Simulium (Nevermannia) cryophilum group	000	000	+00	000	000	000	000
Simulium (Eusimulium) aureum group	000	000	000	0++	0+0	0+0	00+
Simulium (Wilhelmia) sp.	000	+++	000	000	+00	00+	00+
Simulium (Wilhelmia) equinum	000	000	000	000	000	+00	000
Simulium (Simulium) reptans group	+00	000	000	000	+00	000	000
Simulium (Simulium) posticatum	000	00+	000	000	000	000	000
Simulium (Simulium) argyreatum group	0+0	000	000	000	000	000	000
Simulium (Simulium) ornatum group	000	000	0++	00+	+++	+++	0++
Empididae	000	000	000	00+	000	000	000
Chelifera group	000	000	+0+	+00	000	000	+00
Hemerodromia group	+00	000	000	000	00+	+0+	+00
Wiedemannia group	00+	000	000	000	+00	+0+	+00
Dolichopodidae	000	000	00+	000	000	000	000
Atherix ibis	+++	+0+	000	000	00+	0++	000
Chrysops sp.	000	000	000	+00	000	000	000
Linnophora sp.	000	000	00+	+0+	00+	000	000

Appendix G Full taxon lists for each new site sampled by Southern region. The three columns for each site represent spring, summer and autumn.
 + = taxon present and 0 = taxon absent from sample.

1 DITTON STREAM	DITTON	19 MAR 1990 04 JUL 1990 19 OCT 1990
2 SUTTON STREAM	ROAD BRIDGE	02 MAY 1990 15 AUG 1990 19 OCT 1990

	1	2
Polycelis felina	++0	+00
Valvata cristata	+00	000
Potamopyrgus jenkinsi	+++	+++
Lymnaea palustris	+++	000
Lymnaea stagnalis	0++	000
Lymnaea peregra	+++	000
Physa fontinalis	00+	000
Anisus vortex	+++	000
Gyraulus albus	0++	000
Bathymphalus contortus	+00	000
Acroloxus lacustris	000	+00
Ancylus fluviatilis	000	0+0
Pisidium casertanum	0++	000
Pisidium milium	+00	0+0
Pisidium subtruncatum	+00	+0+
Pisidium nitidum	+0+	00+
Nais alpina	0++	000
Nais elinguis	+00	000
Nais pardalis	+++	000
Stylaria lacustris	00+	000
Tubificidae	0+0	+++
Psammoryctides barbatus	+++	0++
Limnodrilus hoffmeisteri	+00	0+0
Rhyacodrilus coccineus	+++	000
Aulodrilus pluriset	000	+++
Enchytraeus group	0++	00+
Stylodrilus heringianus	+++	000
Eiseniella tetraedra	+00	000
Pisicicola geometra	0++	00+
Theromyzon tessulatum	00+	000
Glossiphonia complanata	0+0	+++
Helobdella stagnalis	+++	000
Erpobdella octoculata	0++	000
Trocheta sp.	0+0	000
Hydracarina	+++	+0+
Asellus aquaticus	+0+	000
Asellus meridianus	+++	000
Gammarus pulex	+++	+++
Baetis rhodani	+++	0+0
Centroptilum luteolum	000	+00
Paraleptophlebia sp.	000	00+
Habrophlebia fusca	000	+00
Ephemerella ignita	000	+00
Ephemerella danica	000	+++
Nemoura cinerea	000	+00
Nemoura avicularis	000	00+
Leuctra fusca	000	0+0
Calopteryx splendens	000	+00
Calopteryx virgo	000	00+
Velia sp.	000	0+0
Velia caprai	000	+00
Oreodytes sanmarkii	000	+00
Platambus maculatus	000	0++
Orectochilus villosus	000	+00
Helophorus sp.	000	+00
Elmis aenea	+++	+++
Limnius volckmari	00+	+++
Riolus subviolaceus	0++	00+
Sialis lutaria	000	+++
Rhyacophila sp.	000	0+0
Rhyacophila dorsalis	0++	000
Agapetus sp.	000	0+0
Tinodes unicolor	+++	000
Lype sp.	000	+++
Hydropsyche siltalai	00+	000
Hydropsyche saxonica	000	0+0
Hydroptila sp.	0++	000
Limnephilidae	00+	000
Limnephilus lunatus group	++0	000

Appendix G (contd)

	1	2
Potamophylax latipennis	000	0++
Halesus radiatus	000	+00
Chaetopteryx villosa	000	++0
Adicella reducta	0+0	000
Silo sp.	000	0+0
Silo pallipes	000	00+
Lasiocephala basalis	000	+00
Sericostoma personatum	000	+++
Helius sp.	000	+00
Dicranota sp.	0+0	0+0
Limnophila (Eloeophila) sp.	000	00+
Pericoma fallax	+0+	000
Ptychoptera sp.	000	+++
Ceratopogonidae	++0	+++
Apsectrotanytus trifascipennis	000	+++
Macropelopia sp.	0+0	0+0
Procladius sp.	000	+0+
Thienemannimyia group	+++	000
Trissopelopia longimana	000	0+0
Brillia longifurca	000	0+0
Brillia modesta	00+	0++
Cricotopus (Cricotopus) trifascia	0+0	000
Cricotopus (Isocladius) sp.	00+	000
Eukiefferiella claripennis	+00	000
Heterotanytarsus apicalis	000	00+
Heterotrissocladius sp.	000	+0+
Orthocladius (Euorthocladius) thienemanni	0+0	000
Rheocricotopus sp.	00+	+00
Corynoneura sp.	000	+00
Paratrissocladius excerptus	000	+++
Thienemanniella sp.	00+	000
Cricotopus group	+++	+00
Tvetenia calvenscens	+++	000
Tvetenia discoloripes group	00+	000
Prodiamesa olivacea	000	0+0
Polypedilum sp.	++0	00+
Micropsectra sp.	+0+	+++
Tanytarsus sp.	00+	0+0
Rheotanytarsus sp.	+00	000
Simulium (Nevermannia) angustitarse group	000	0+0
Simulium (Eusimulium) aureum group	00+	000
Simulium (Simulium) ornatum group	+++	0+0
Oxycera formosa	00+	000
Oxycera pardalina	+++	000
Chelifera group	000	00+
Hemerodromia group	00+	000
Wiedemannia group	+++	000
Chrysops sp.	000	+0+
Limnophora sp.	+00	000

Appendix H Full taxon lists for each new site sampled by South Western region. The three columns for each site represent spring, summer and autumn.
 + = taxon present and 0 = taxon absent from sample.

1 BODILLY STREAM	BODILLY BRIDGE	19 MAR 1991	13 JUN 1991	03 SEP 1991
2 NEWLYN RIVER	SKIMMEL BRIDGE	01 MAR 1990	05 JUN 1990	01 SEP 1993
3 BALA BROOK	100M U/S ZEAL BRIDGE	26 APR 1990	25 JUL 1990	16 OCT 1990
4 POLTESCO RIVER	POLTESCO BRIDGE	15 MAY 1990	08 JUN 1990	11 SEP 1990
5 STITHIANS STREAM	SEARAUGH MOOR	09 NOV 1990	13 JUN 1990	20 SEP 1990
6 TREVAYLOR STREAM	TRYTHOGGA	02 MAR 1990	05 JUN 1990	05 SEP 1990
7 GWEELK RIVER	METHER-UNY-MILL BRIDGE	07 MAR 1990	13 JUN 1990	18 SEP 1990
8 MANACCAN RIVER	POLKANOGGO	06 MAR 1990	11 JUN 1990	11 SEP 1990
9 ST. KEVERNE STREAM	PORTHOUSTOCK BRIDGE	06 MAR 1990	11 JUN 1990	14 SEP 1993

	1	2	3	4	5	6	7	8	9
Planariidae (incl. Dugesiidae)	000	000	000	+++	000	000	000	000	++0
Planaria torva	000	000	000	000	000	000	000	000	00+
Polycelis nigra group	000	000	000	++0	000	000	000	00+	000
Polycelis felina	0++	+0+	+00	+0+	+++	+++	+0+	00+	+0+
Potamopyrgus jenkinsi	00+	+++	+00	+++	000	+++	+00	+++	+++
Lymnaea peregra	000	000	000	0++	000	000	000	000	000
Physa fontinalis	000	000	000	000	000	000	000	000	00+
Physa acuta group	000	000	000	000	000	000	000	000	+00
Physa heterostrophia	000	000	000	000	000	000	000	000	00+
Anisus leucostoma	000	000	000	0++	000	000	000	000	000
Armiger crista	000	000	000	0++	000	000	000	000	000
Ancylus fluviatilis	+++	+++	000	+++	+++	+++	+0+	+++	+++
Succinea sp.	000	000	000	000	000	000	000	000	0+0
Sphaeriidae	+00	000	000	000	000	000	000	000	000
Pisidium sp.	000	+++	000	0+0	000	+00	+00	+0+	0++
Pisidium casertanum	0++	000	000	00+	+++	000	00+	000	000
Pisidium personatum	00+	000	000	+0+	00+	0++	00+	000	000
Pisidium subtruncatum	000	000	000	000	000	000	000	000	+00
Pisidium nitidum	000	000	000	000	000	000	000	000	+00
Ophidonaia serpentina	000	000	000	+00	000	000	000	+00	000
Nais alpina	000	000	0+0	000	000	000	000	000	000
Nais elinguis	000	000	000	000	000	000	000	+00	000
Tubificidae	00+	000	000	000	00+	00+	+00	000	+0+
Tubifex ignotus	000	000	000	000	000	000	000	000	00+
Limnodrilus hoffmeisteri	000	000	000	000	000	000	000	000	0+0
Spirosperma ferox	000	000	000	000	000	000	000	00+	000
Rhyacodrilus coccineus	+0+	+00	000	+0+	+0+	+0+	+0+	+++	+++
Aulodrilus plurisetia	000	000	00+	00+	000	000	000	000	+0+
Enchytraeus group	+00	+0+	0+0	000	000	000	000	+00	+0+
Lumbriculus variegatus group	00+	00+	0++	+++	0+0	0++	+++	+00	+++
Stylodrilus sp.	+00	00+	000	000	000	+00	000	000	+0+
Stylodrilus brachystylus	00+	000	000	000	000	000	000	000	000
Lumbricidae	0+0	000	0+0	000	000	0++	000	0+0	00+
Eiseniella tetraedra	+00	+0+	000	000	000	+00	000	000	000
Hemicleptis marginata	000	000	000	00+	000	000	000	000	000
Glossiphonia complanata	000	000	000	0+0	000	000	000	+++	+++
Helobdella stagnalis	00+	000	000	+00	000	00+	000	000	+++
Dina lineata	000	000	000	00+	000	000	000	000	0+0
Hydracarina	+0+	00+	000	0+0	00+	0+0	000	+++	0+0
Asellus aquaticus	000	000	000	000	000	+00	000	000	000
Asellus meridianus	000	000	000	0++	000	000	000	000	+++
Crangonyx pseudogracilis	000	000	000	000	000	+0+	000	000	+++
Gammarus duebeni	000	000	000	+++	000	000	000	000	000
Gammarus pulex	000	+++	00+	000	+++	000	000	+++	000
Baetis scambus group	000	000	0+0	000	000	000	000	000	000
Baetis vernus	+0+	000	000	000	000	000	000	000	000
Baetis rhodani	+++	+++	00+	+++	+++	+++	+++	+++	+++
Baetis muticus	000	000	000	+0+	000	+++	+++	000	00+
Baetis niger	+0+	+00	000	000	000	000	000	000	000
Centroptilum luteolum	000	000	000	00+	000	000	000	000	000
Procladius bifidus	000	000	000	0+0	000	000	000	000	000
Rhithrogena semicolorata group	000	000	000	000	+00	000	+++	000	+00
Ecdyonurus sp.	000	000	000	000	000	000	000	+00	000
Paraleptophlebia cincta	000	000	000	0+0	000	000	000	000	000
Ephemera ignita	0++	0++	000	+++	0+0	0++	0++	+++	+++

Appendix H (contd)

	1	2	3	4	5	6	7	8	9
Ephemera danica	000	000	000	000	000	000	000	0+0	000
Caenis rivulorum	000	000	000	+0	000	000	000	000	000
Brachyptera risi	000	000	000	+0	000	000	+0	000	000
Protonemura sp.	000	000	000	000	000	0+0	000	000	000
Protonemura meyeri	0++	+0+	+00	+0+	+0+	+0+	+++	000	000
Amphinemura sulciollis	+0	000	+00	+00	000	+0	+0	000	000
Nemurella picteti	000	000	000	000	000	000	000	000	+0+
Nemoura avicularis	000	000	000	000	000	000	00+	000	000
Leuctra sp.	0+0	000	000	000	000	000	000	000	000
Leuctra geniculata	000	000	000	+++	000	000	000	000	000
Leuctra inermis	+00	000	+00	000	+00	000	+00	000	000
Leuctra hippopus	+00	000	00+	+00	000	+00	000	000	000
Leuctra nigra	+00	000	+00	000	+00	000	+00	000	000
Leuctra fusca	00+	0++	0+0	0++	000	0++	0++	0++	000
Isoperla grammatica	+0	000	000	+00	000	+00	+0	+00	+0
Chloroperla torrentium	+++	+00	+0+	+0	+0	0+0	+++	+00	000
Coenagrion puella group	000	000	000	+00	000	000	000	000	000
Calopteryx virgo	+00	0++	000	000	0+0	000	000	00+	+00
Cordulegaster boltonii	+0+	0++	000	000	0+0	0++	+0	00+	+++
Velia sp.	000	000	0+0	000	000	000	00+	0+0	000
Velia caprai	00+	000	000	000	0++	000	000	000	000
Haliphus sp.	000	000	000	0++	000	000	000	000	0+0
Haliphus lineatocollis	000	000	000	000	000	0+0	000	000	00+
Stictotarsus duodecimpustulatus	000	000	000	00+	000	000	000	0+0	000
Oreodytes sanmarkii	000	000	000	000	+00	000	000	000	000
Hydroporus sp.	000	000	000	0+0	000	000	000	000	000
Hydroporus tessellatus	00+	000	000	000	000	000	000	000	000
Agabus sp.	000	000	000	000	000	000	000	000	0+0
Orectochilus villosus	000	000	000	00+	000	+++	000	+0+	000
Hydrophilidae (incl. Hydraenidae)	000	000	000	000	000	+00	000	000	000
Hydraena riparia	+00	000	000	000	000	000	000	000	000
Hydraena gracilis	+0	+++	000	+++	+0+	0++	+++	+++	000
Limnebius truncatellus	00+	000	000	000	000	000	000	000	000
Helophorus brevipalpis	000	000	000	0+0	0+0	0+0	0+0	000	0+0
Anacaena globulus	00+	000	000	000	000	000	000	000	000
Elodes sp.	000	000	+00	000	+++	000	00+	000	+00
Elmis aenea	+++	+++	000	+++	+++	+++	+++	+++	+++
Esolus parallelepipedus	000	000	000	+++	000	000	000	000	000
Limnius volckmari	+++	+++	+00	+0+	+++	+++	+++	+++	00+
Oulimnius sp.	000	000	000	000	000	000	00+	000	000
Oulimnius tuberculatus	000	+0+	000	+++	000	000	000	000	000
Sialis lutaria	000	000	000	00+	000	000	000	000	000
Sialis fuliginosa	000	000	00+	000	000	000	000	000	000
Rhyacophila sp.	+00	000	000	000	000	000	000	+00	000
Rhyacophila dorsalis	0++	+++	0++	+00	+++	+++	+++	0++	+++
Rhyacophila munda	000	+0	000	000	000	0+0	000	000	000
Agapetus sp.	000	+00	000	+0	+++	+++	+0	+0+	+++
Philopotamus montanus	000	+0+	000	000	000	+++	+++	000	000
Wormaldia sp.	000	0+0	000	000	000	0+0	000	00+	000
Plectrocnemia sp.	000	000	+00	000	000	000	000	000	000
Plectrocnemia conspersa	000	000	00+	+0	+00	000	000	0+0	000
Plectrocnemia geniculata	000	000	000	0+0	000	0+0	000	000	000
Polycentropus sp.	0+0	000	+00	000	000	0+0	000	000	000
Polycentropus flavomaculatus	00+	+00	00+	+++	00+	00+	+++	000	000
Polycentropus kingi	000	000	000	000	000	000	0+0	000	000
Lype sp.	000	000	000	000	000	000	+00	000	+0
Hydropsyche siltalai	+++	+++	00+	+++	+++	+++	+++	+++	+++
Diplectrona felix	000	000	000	000	000	000	000	000	+00
Hydroptila sp.	000	000	000	0++	000	000	000	000	000
Ithytrichia sp.	000	000	000	000	000	000	+00	000	000
Limnephilidae	000	000	00+	000	000	000	000	000	000
Limnephilus lunatus group	000	000	000	000	000	000	000	000	+0
Potamophylax cingulatus group	+00	000	000	000	000	000	000	000	000
Potamophylax cingulatus	000	+0	000	000	+00	000	+0	+00	000
Halesus sp.	+00	000	000	000	000	000	000	0+0	0+0
Halesus radiatus	000	+0	000	+0+	+++	0+0	+++	+0	+00
Chaetopteryx villosa	0++	0++	000	00+	0++	0+0	000	0+0	+00
Beraea pullata	000	000	000	000	000	000	000	000	00+
Odontocerum albicorne	000	000	000	+++	000	000	+++	+++	000
Athripsodes albifrons	000	000	000	000	000	0+0	000	000	000
Adicella reducta	+0+	000	000	000	000	000	000	0+0	00+
Oecetis testacea	000	000	000	000	000	000	00+	000	000
Goeridae	0+0	000	000	000	000	000	000	000	000
Silo pallipes	+0+	+00	000	000	+0+	+++	+0+	+0+	00+
Silo nigricornis	000	000	000	00+	000	000	000	000	000
Lepidostomatidae	000	000	00+	000	000	000	000	000	000
Crunoecia irrorata	000	000	000	000	000	000	000	000	0++
Lepidostoma hirtum	0+0	+0	000	+0	000	+0	+0	+0	000
Sericostoma personatum	+++	+++	000	+0	+++	+++	+++	+++	+++
Non-gilled Pyralidae	000	000	000	000	000	000	000	000	0+0
Tipula sp.	000	000	000	000	000	0+0	0+0	000	000
Tipula rufina	000	0+0	000	000	000	000	0+0	000	000

Appendix H (contd)

	1	2	3	4	5	6	7	8	9
Tipula montium group	000	000	000	000	+00	000	000	000	000
Thaumastoptera calceata	000	000	000	+00	000	000	000	000	000
Pedicia (Pedicia) group	000	000	000	+00	000	000	000	000	000
Pedicia (Trichyphona) sp.	00+	000	000	000	000	000	000	000	000
Dicranota sp.	+++	+0+	+++	+0+	+++	0++	+++	+++	+0+
Limnophila (Eloeophila) sp.	0+0	+00	000	+00	+00	0+0	+0+	+00	+0+
Phyllidorea sp.	000	000	000	000	000	000	000	000	0+0
Pilaria (Neolimnomyia) sp.	000	000	000	000	000	000	000	000	+00
Pilaria (Pilaria) sp.	000	000	000	000	000	000	000	000	+00
Erioptera sp.	000	000	000	000	000	000	000	000	00+
Pericoma blandula	000	000	000	000	000	0+0	000	000	000
Pericoma pseudoexquisita	000	0+0	000	00+	000	0++	000	000	000
Pericoma pulchra	000	000	000	000	000	000	000	000	+00
Pericoma trivialis group	0++	000	000	0+0	000	000	000	000	00+
Psychoda severini	000	000	000	000	000	000	000	000	0+0
Ptychoptera sp.	000	000	000	000	000	000	000	000	0+0
Dixa maculata complex	000	000	000	000	000	000	000	000	0+0
Dixa nebulosa	000	000	000	000	000	000	000	+00	00+
Dixa nubilipennis	000	000	000	000	000	000	000	00+	000
Dixa puberula	000	0++	000	000	000	+++	0+0	000	000
Ceratopogonidae	+++	+00	000	+00	000	+00	+0+	00+	0++
Apsectrotanypus trifascipennis	000	00+	000	000	000	00+	000	00+	00+
Macropelopia sp.	00+	00+	000	0++	000	000	+00	0+0	+++
Procladius sp.	000	000	000	000	000	000	000	00+	000
Procladius (Holotanypus) sp.	000	000	000	00+	000	000	000	000	000
Psectrotanypus varius	000	000	000	+00	000	000	000	000	000
Conchapelopia sp.	000	000	000	000	000	00+	000	00+	000
Natarsia sp.	000	000	000	000	000	000	000	000	0++
Thienemannimyia group	000	+++	000	0++	0+0	0+0	+++	+++	+++
Trissopelopia longimana	+00	000	000	00+	000	00+	+0+	000	+00
Diamesinae	000	000	+00	000	000	000	000	000	000
Potthastia longimana group	0+0	+++	0+0	000	000	0+0	+00	000	000
Brillia modesta	+++	+++	0+0	+00	0+0	+++	+++	+++	+++
Eukiefferiella sp.	000	000	000	000	000	00+	000	000	000
Eukiefferiella brevicar	000	000	000	000	000	000	000	+00	000
Eukiefferiella claripennis	000	000	000	000	000	+00	000	000	000
Eukiefferiella ilkleyensis	000	+0+	000	000	000	000	000	000	000
Heterotrissocladius sp.	00+	+00	000	000	000	000	00+	000	000
Psectrocladius (Psectrocladius) psilopterus	000	000	+00	000	000	000	000	000	000
Rheocricotopus sp.	+00	000	000	+00	0+0	000	000	+00	000
Chaetocladius sp.	000	000	0+0	000	000	000	000	000	000
Corynoneura sp.	000	000	000	000	0+0	000	000	000	000
Metriocnemus obscuripes	000	000	000	0+0	000	0+0	000	000	000
Parametriocnemus stylatus	000	000	000	+00	000	00+	000	000	000
Paraphaenocladus sp.	000	000	+00	000	000	000	000	000	000
Paratrissocladius excerptus	000	000	000	00+	000	00+	00+	0++	000
Thienemanniella sp.	0++	000	+++	000	000	000	000	+00	000
Orthocladus lignicola	000	000	000	000	000	000	+00	000	000
Cricotopus group	000	000	+00	000	000	000	000	+00	000
Tvetenia sp.	+00	0+0	000	000	000	+00	000	000	+00
Tvetenia calvescens	0++	00+	0++	+00	0++	0+0	0+0	+00	000
Tvetenia discoloripes group	0+0	+0+	000	+0+	+++	0++	+++	0+0	000
Prodiamesa olivacea	00+	0++	000	0++	+00	000	0++	0+0	+++
Chironomus sp.	000	000	000	0+0	000	000	000	000	000
Microtendipes sp.	000	000	000	+00	000	000	000	000	000
Microtendipes rydalis group	000	000	000	+00	000	000	000	000	000
Polypedilum sp.	0++	0+0	00+	+++	0++	0++	0+0	+++	000
Phaenopsectra sp.	000	000	000	+00	000	000	000	000	000
Xenochironomus xenolabis	000	000	000	000	000	0+0	000	000	000
Microsectra sp.	0+0	00+	0++	0+0	+++	0++	0++	+++	00+
Tanytarsus sp.	000	000	000	0+0	000	000	000	000	000
Tanytarsus brundini	000	000	000	0+0	000	000	000	000	000
Rheotanytarsus sp.	0+0	+0+	000	000	0++	000	+++	000	000
Stempellinella group	000	000	000	000	000	000	0++	000	000
Microsectra group	000	000	000	000	000	000	000	000	+00
Simulium (Nevermannia) vernum group	+00	+00	000	000	+00	000	000	000	000
Simulium (Nevermannia) cryophilum group	+0+	+0+	+0+	+00	+00	+0+	+++	000	+00
Simulium (Nevermannia) cryophilum	0+0	000	000	000	000	000	000	000	000
Simulium (Nevermannia) armoricanum	000	000	0+0	000	000	0+0	000	000	000
Simulium (Nevermannia) lundstromi	000	000	000	000	000	000	000	00+	000
Simulium (Nevermannia) angustitarse group	000	000	000	000	+00	000	000	000	000
Simulium (Eusimulium) aureum group	000	000	0+0	00+	+00	00+	000	0+0	00+
Simulium (Simulium) argyreatum group	000	+00	0+0	000	000	+++	+00	000	000
Simulium (Simulium) ornatum group	+0+	+++	0+0	+++	0++	0++	0++	+++	+++
Empididae	000	00+	000	000	000	000	000	000	0+0
Chelifera group	+00	+00	000	000	0+0	0++	+00	000	00+
Hemerodromia group	000	000	000	000	000	0+0	000	+00	000
Atalanta group	000	000	000	0+0	000	000	000	000	000
Wiedemannia group	000	000	+00	000	000	00+	0+0	000	000
Dolichopodidae	000	000	000	000	000	000	+00	+00	000
Ephydriidae	000	000	000	+00	000	000	000	000	000
Limnophora sp.	000	+0+	000	0+0	000	0++	000	000	000

Appendix I Full taxon lists for each new site sampled by Thames region. The three columns for each site represent spring, summer and autumn.
 + = taxon present and 0 = taxon absent from sample.

1 R. KENNET	U/S ALDERSHOT WATER	17 MAY 1990 28 AUG 1990 24 OCT 1990
2 R. LAMBOURN	BAGNOR	06 MAR 1990 07 AUG 1990 16 NOV 1990
3 R. LYDE	DEANLANDS FARM	21 MAR 1990 02 JUL 1990 14 SEP 1990
4 R. COLN	FOSSE BRIDGE	28 MAR 1990 05 JUN 1990 05 SEP 1990
5 R. WINDRUSH	D/S DICKLER	26 MAR 1990 06 JUL 1990 26 SEP 1990
6 CLAYHILL BROOK	U/S BURGHFIELD STW	05 APR 1990 03 JUL 1990 22 NOV 1990
7 R. ASH	EASNEYE	26 MAR 1990 18 JUN 1990 25 SEP 1990
8 R. CHESSE	U/S R. COLNE	02 APR 1990 03 JUL 1990 10 OCT 1990

	1	2	3	4	5	6	7	8
Planariidae (incl. Dugesiidae)	00+	000	000	000	000	000	000	000
Polycelis nigra group	000	000	+0+	000	000	000	0+0	000
Dugesia tigrina	000	000	000	000	000	000	000	00+
Dugesia polychroa group	00+	000	000	000	000	000	000	000
Dendrocoelum lacteum	000	000	000	00+	000	000	000	000
Chordodidae	000	000	+00	000	000	000	000	000
Theodoxus fluviatilis	+++	000	000	000	000	000	000	000
Valvata piscinalis	+++	+00	0+0	0++	00+	000	+++	000
Potamopyrgus jenkinsi	000	000	0++	+++	+++	+++	+++	+00
Bithynia tentaculata	+++	0+0	000	000	000	000	00+	00+
Bithynia leachii	0+0	000	000	000	000	000	000	000
Lymnaea palustris	000	0+0	0++	+00	000	000	000	000
Lymnaea stagnalis	00+	+++	000	000	000	000	000	00+
Lymnaea peregra	+++	+++	+++	+++	+++	000	+++	+++
Physa fontinalis	00+	0+0	0++	00+	000	000	00+	+++
Planorbis group	000	000	000	000	0+0	000	000	000
Planorbis carinatus	+00	+0+	000	00+	00+	000	0++	00+
Anisus vortex	00+	0++	+++	000	+++	000	0++	+0+
Anisus leucostoma	000	000	000	+++	000	000	000	000
Gyraulus albus	0++	+00	000	0++	00+	000	+++	0++
Armiger crista	00+	000	000	000	00+	000	000	000
Bathymphalus contortus	0++	+++	000	000	000	000	000	00+
Acroloxus lacustris	0+0	+00	000	000	000	000	000	+00
Ancylus fluviatilis	+0+	+++	+++	0++	0+0	00+	+0+	+0+
Succinea sp.	00+	000	000	000	000	000	000	000
Unionidae	000	000	000	000	+00	000	000	000
Anodonta group	000	000	000	000	000	000	00+	000
Sphaerium corneum	+++	+00	000	0++	000	000	+++	0++
Pisidium sp.	000	+00	0+0	000	000	+00	000	000
Pisidium amnicum	000	000	000	000	+0+	000	000	000
Pisidium casertanum	000	000	000	+0+	+00	000	000	00+
Pisidium personatum	000	000	000	000	0+0	000	000	000
Pisidium milium	0+0	000	000	000	000	000	000	000
Pisidium subtruncatum	+00	0+0	+00	0++	+++	00+	0++	+00
Pisidium henslowanum	0++	000	000	000	000	000	000	000
Pisidium nitidum	+++	0++	+0+	0++	0++	000	+++	+00
Ophidonais serpentina	000	000	000	000	000	00+	000	000
Nais barbata	000	000	000	000	000	000	0+0	000
Nais elinguis	000	000	000	000	000	000	000	+00
Nais bretscheri	000	000	000	000	000	000	0+0	000
Stylaria lacustris	00+	000	000	000	000	000	00+	000
Tubificidae	00+	0+0	00+	00+	0++	+0+	000	000
Tubifex tubifex	000	000	000	+00	000	00+	0+0	000
Tubifex ignotus	0+0	0++	000	000	000	000	000	00+
Psammoryctides barbatus	+00	+++	+0+	0++	+0+	000	+++	+0+
Limnodrilus hoffmeisteri	0+0	+0+	+00	+00	+0+	0+0	000	+++
Limnodrilus udekemianus	000	000	000	000	00+	000	000	0+0
Spirosperma ferox	000	000	+00	000	000	000	000	000
Spirosperma velutinus	000	000	000	00+	000	000	000	00+
Potamothenix hammoniensis	+00	00+	000	000	000	000	+++	000
Potamothenix bavaricus	000	000	000	000	000	000	000	0+0
Rhyacodrilus coccineus	+0+	+0+	000	+00	+00	+00	000	000
Aulodrilus plurisetia	0+0	+++	000	+00	00+	000	00+	+++
Enchytraeus group	000	0+0	000	000	000	000	000	+00
Haplotaxis gordioides	+00	000	000	000	000	000	000	000
Lumbriculus variegatus group	000	+0+	000	+00	+00	000	000	0+0
Stylocladus sp.	000	000	000	000	000	+00	000	+00

Appendix I (contd)

	1	2	3	4	5	6	7	8
Stylodrilus heringianus	+++	++0	++0	+++	000	000	++0	00+
Stylodrilus brachystylus	000	+0+	+00	000	000	000	000	000
Stylodrilus lemani	000	000	000	000	000	000	0++	000
Lumbricidae	+00	000	000	000	000	+00	000	00+
Eiseniella tetraedra	000	000	000	+0+	000	00+	000	+00
Piscicola geometra	+++	+++	+++	0++	+++	000	000	000
Theromyzon tessulatum	0+0	000	000	0+0	000	000	+00	000
Glossiphonia complanata	+++	++0	+++	0++	+0+	0++	+++	0++
Helobdella stagnalis	+++	+++	+0+	00+	0++	000	0++	+++
Erpobdella octoculata	+++	++0	+++	+++	+++	000	+++	+++
Trocheta subviridis	000	000	+00	000	000	000	000	000
Hydracarina	+++	+++	+++	+++	+++	0+0	+++	+++
Asellus aquaticus	+++	+++	+++	0+0	000	000	+++	+++
Asellus meridianus	000	000	000	000	000	00+	000	000
Crangonyx pseudogracilis	000	000	000	0+0	000	000	000	000
Gammarus pulex	+++	+++	+++	+++	+++	+++	+++	+++
Baetis sp.	000	000	000	00+	000	000	000	000
Baetis scambus group	+++	0+0	000	0+0	0+0	000	00+	0++
Baetis vernus	0++	0+0	+++	0+0	0++	000	0++	0++
Baetis buceratus	0+0	000	000	000	000	000	000	000
Baetis rhodani	000	+0+	+++	+0+	+++	+00	+++	+++
Baetis niger	000	0+0	000	000	000	000	000	000
Centroptilum luteolum	+0+	0+0	000	0+0	0+0	000	+0+	00+
Centroptilum pennulatum	000	0+0	000	000	000	000	0++	000
Cloeon dipterum	000	000	000	000	000	00+	00+	000
Procloeon bifidum	0+0	000	000	000	0+0	000	000	000
Rhithrogena semicolorata group	000	000	000	000	+00	000	000	000
Heptagenia sp.	000	000	000	000	00+	000	000	000
Heptagenia sulphurea	00+	+00	000	+0+	+00	000	000	+0+
Ecdyonurus sp.	000	000	000	000	+00	000	000	000
Paraleptophlebia sp.	000	+00	000	000	000	00+	000	000
Paraleptophlebia submarginata	00+	00+	000	000	000	+00	+00	+0+
Habrophlebia fusca	000	000	0+0	0+0	0+0	000	0+0	000
Ephemerella ignita	+++	0++	+++	0++	+++	000	+++	0++
Ephemerella danica	+++	+++	+++	0++	+++	000	+++	+++
Caenis luctuosa group	+++	+00	000	0++	+00	000	+++	+++
Caenis horaria	000	000	000	000	00+	000	+++	000
Caenis rivulorum	+00	00+	000	0+0	+00	000	0+0	000
Amphinemura sulcicollis	000	000	000	000	+00	000	000	000
Nemoura cinerea	000	000	000	+00	000	000	000	000
Leuctra fusca	000	0+0	000	000	0++	000	000	000
Perlodes microcephala	00+	00+	000	000	000	000	000	000
Isoperla grammatica	000	000	000	000	000	+00	000	000
Ischnura elegans	+0+	000	000	000	000	000	000	+00
Calopteryx splendens	+++	000	000	0+0	+0+	000	000	+++
Cordulegaster boltonii	000	000	000	000	000	00+	000	000
Velia sp.	+00	000	000	0+0	0+0	+00	000	000
Velia caprai	000	000	000	000	000	000	000	0+0
Gerridae	000	000	000	000	000	000	000	0+0
Gerris (Gerris) lacustris	000	0+0	000	000	000	000	000	000
Aphelocheirus aestivalis	+++	000	000	000	000	000	000	000
Notonecta maculata	000	000	000	000	000	00+	000	000
Corixidae	000	000	000	000	0+0	000	0+0	0+0
Micronecta sp.	000	00+	000	000	+0+	000	+00	+0+
Micronecta poweri	000	000	000	0+0	0+0	000	0+0	000
Hesperocorixa linnei	000	0+0	000	000	000	000	000	000
Hesperocorixa sahlbergi	000	000	000	000	00+	00+	000	000
Sigara (Sigara) sp.	00+	00+	000	0++	000	000	+0+	+0+
Sigara falleni	000	000	000	000	000	000	00+	000
Brychius elevatus	000	00+	+++	0++	+00	000	0+0	0++
Haliplus sp.	000	+00	000	0+0	000	000	000	000
Haliplus lineatocollis	000	000	000	000	00+	000	0+0	000
Haliplus fluviatilis	000	000	000	000	00+	000	00+	000
Haliplus immaculatus	+00	000	000	000	000	000	000	000
Haliplus wehnckei	000	000	000	000	000	000	00+	000
Deronectes latus	+0+	000	000	000	000	000	000	000
Potamonectes sp.	0+0	000	000	000	000	000	000	000
Potamonectes depressus	000	000	000	00+	0++	000	0++	000
Stictotarsus duodecimpustulatus	000	000	000	000	000	000	00+	000
Oreodytes sanmarkii	000	00+	000	0++	0+0	000	000	000
Agabus sp.	000	000	000	0+0	000	000	000	000
Agabus paludosus	+00	000	000	000	000	000	000	000
Platambus maculatus	00+	+++	00+	00+	0++	0++	00+	0++
Ilybius sp.	0+0	00+	00+	00+	00+	00+	000	000
Ilybius fuliginosus	000	000	0+0	000	000	000	000	000
Acilius sulcatus	000	000	000	000	000	00+	000	000
Gyrinus sp.	000	000	000	000	0+0	000	000	000
Orectochilus villosus	+0+	+0+	0+0	+0+	000	000	+++	00+
Hydrophilidae (incl. Hydraenidae)	000	000	000	000	000	000	0+0	000
Hydraena riparia	000	000	000	00+	000	000	000	000
Helophorus aequalis	000	000	000	000	000	+00	000	000
Helophorus brevipalpis	000	000	000	0+0	0+0	0+0	000	000

Appendix I (contd)

	1	2	3	4	5	6	7	8
Elodes sp.	000	000	000	00+	000	00+	000	000
Elmis aenea	+++	+++	+++	+++	+++	+++	+++	+++
Esolus parollelepipedus	000	000	000	00+	+00	000	000	000
Limnius volckmari	+++	+++	+0+	0++	000	0+0	+++	+++
Oulimnius sp.	000	+00	000	000	0++	000	000	000
Oulimnius tuberculatus	+00	000	+00	+++	+00	000	+++	000
Riolus subviolaceus	00+	000	+++	00+	+++	000	000	000
Hydronomus alismatis	0+0	000	000	000	000	000	000	000
Sialis sp.	000	000	000	000	000	000	0+0	000
Sialis lutaria	0+0	+0+	00+	00+	+++	000	00+	0++
Sialis fuliginosa	000	000	000	00+	000	000	000	000
Sisyra sp.	000	000	000	000	000	000	00+	000
Rhyacophila sp.	0+0	000	000	000	000	000	000	0+0
Rhyacophila dorsalis	+0+	+00	+++	+++	0++	000	0+0	+0+
Agapetus sp.	00+	+++	+0+	+0+	+00	+00	000	+++
Plectrocnemia conspersa	000	000	000	000	000	+0+	000	000
Polycentropus flavomaculatus	+++	+++	000	0+0	+++	000	00+	0+0
Polycentropus irrortatus	+00	00+	000	000	0+0	000	000	000
Tinodes waeneri	000	000	000	000	000	000	+00	000
Lype sp.	000	000	+00	0+0	000	+00	000	000
Psychomyia pusilla	+0+	000	000	000	+00	000	000	000
Hydropsyche sp.	000	000	000	000	0+0	000	0+0	000
Hydropsyche pellucidula	+0+	0+0	+0+	+++	+0+	000	+0+	0++
Hydropsyche contubernalis	00+	000	000	000	000	000	000	000
Hydropsyche siltalai	0++	00+	+00	+00	000	000	+++	+0+
Hydropsyche saxonica	000	000	000	000	000	+00	000	000
Hydroptila sp.	+00	+++	000	+++	0++	000	+++	+00
Ithytrichia sp.	000	+00	000	+00	000	000	000	000
Oxyethira sp.	000	+++	000	000	000	000	000	000
Phryganea grandis group	000	+00	000	000	000	000	00+	000
Limnephilidae	000	000	000	000	000	000	00+	000
Drusus annulatus	000	+00	000	00+	000	000	000	+00
Limnephilus sp.	000	00+	000	000	000	000	000	000
Limnephilus lunatus group	+00	+00	+00	+00	0+0	000	000	+00
Glyptotaelius pellucidus	000	000	+00	000	000	000	000	000
Anabolia nervosa	000	+00	000	000	000	000	000	000
Potamophylax cingulatus group	00+	000	0+0	000	000	000	000	000
Potamophylax latipennis	000	+0+	+0+	0+0	+00	000	0+0	000
Halesus sp.	000	000	+00	000	000	+00	000	000
Halesus radiatus	+00	+00	000	00+	+00	000	+00	+00
Melampophylax mucoreus	000	0+0	+++	000	000	000	000	000
Micropterna sequax	000	000	000	000	000	+0+	000	000
Chaetopteryx villosa	000	0+0	0++	000	000	+00	000	+00
Molanna angustata	0+0	000	000	000	000	000	00+	000
Beraeodes minutus	000	000	000	000	00+	000	000	000
Odontocerum albicorne	000	000	000	000	+++	000	000	000
Athripsodes sp.	000	000	000	00+	000	000	000	000
Athripsodes cinereus	0++	+0+	000	000	000	000	+0+	000
Athripsodes albifrons	+00	0+0	000	0+0	+00	000	+00	0+0
Mystacides nigra	000	000	000	000	000	000	+++	000
Mystacides azurea	00+	+++	000	000	+0+	000	+0+	+++
Ylodes conspersus	+00	000	000	000	000	000	000	000
Ceraclea dissimilis	+00	0+0	000	000	000	000	000	000
Goera pilosa	0++	000	000	00+	000	000	00+	+0+
Silo pallipes	000	000	+++	000	+0+	000	000	000
Silo nigricornis	000	+++	+0+	00+	000	000	000	+0+
Lepidostoma hirtum	+00	+00	0+0	000	0+0	000	000	+00
Brachycentrus subnubilus	0++	0+0	000	0++	0++	000	000	000
Sericostoma personatum	0++	+++	+++	0++	+00	000	000	+++
Non-gilled Pyralidae	000	000	000	00+	000	000	000	000
Tipula sp.	000	000	000	000	000	0+0	000	000
Tipula montium group	000	000	000	000	00+	00+	00+	000
Antocha vitripennis	000	00+	000	000	+00	000	+0+	000
Dicranota sp.	0++	+++	0++	+++	+++	+00	0+0	+++
Pseudolimnophila sp.	000	000	000	+00	000	000	000	000
Limnophila (Eloeophila) sp.	000	+00	000	0+0	000	000	000	+0+
Pilaria (Pilaria) sp.	000	000	000	+0+	000	000	000	+00
Pericoma sp.	000	000	000	000	000	000	00+	000
Pericoma cognata	000	000	000	+00	000	000	000	000
Pericoma fallax	000	000	000	000	000	000	+00	000
Pericoma trivialis group	000	+00	000	000	000	0++	000	000
Psychoda severini	+00	000	000	000	000	000	000	000
Dixa dilatata	000	000	000	000	00+	000	000	000
Dixa nebulosa	000	00+	000	00+	00+	000	000	00+
Ceratopogonidae	+00	+0+	+0+	+++	+00	000	0++	+++
Apsectrotanypus trifascipennis	0+0	+00	0+0	+++	+0+	0++	0+0	+00
Macropelopia sp.	0+0	+00	+00	+0+	+++	00+	0++	00+
Procladius sp.	0+0	000	000	000	00+	000	0++	+00
Ablabesmyia sp.	0+0	000	000	000	000	000	0+0	0+0
Conchapelopia sp.	+00	000	000	000	000	000	000	000
Natarsia sp.	000	000	000	+00	000	000	000	000
Paramerina sp.	000	000	000	0+0	0+0	000	000	000

Appendix I (contd)

	1	2	3	4	5	6	7	8
Thienemannimyia group	0++	0++	++0	+0+	0+0	+++	0+0	+++
Trissopelopia longimana	000	000	000	000	000	++0	000	000
Zavrelimyia group	000	000	000	000	00+	00+	000	000
Diamesa sp.	000	000	000	000	000	+00	000	000
Potthastia gaedii group	0+0	00+	000	+00	000	000	000	+00
Potthastia longimana group	+00	++0	+00	000	00+	000	+++	000
Sympotthastia zavreli	000	000	000	+00	000	000	000	000
Brillia longifurca	+00	000	000	000	000	000	000	000
Brillia modesta	000	0++	000	++0	000	+++	000	0+0
Cricotopus sp.	+00	000	000	+00	+00	000	000	000
Cricotopus (Cricotopus) sp.	0+0	000	000	000	000	000	000	000
Cricotopus (Cricotopus) trifascia	+00	000	0+0	000	+00	000	0+0	+00
Cricotopus (Isocladus) sp.	0++	0+0	0++	000	000	000	000	000
Diplocladius cultriger	000	000	000	+00	000	000	000	000
Eukiefferiella clypeata	++0	0+0	000	000	000	000	000	000
Eukiefferiella ilkleyensis	+00	000	000	0++	0+0	000	000	0++
Eukiefferiella gracei	000	000	000	+00	000	000	000	000
Heterotrissocladus sp.	000	000	000	000	000	0+0	000	+00
Nanocladus sp.	000	000	00+	000	000	000	000	000
Orthocladus (Euorthocladus) rivulorum	000	000	000	000	+00	000	000	000
Orthocladus (Euorthocladus) thienemanni	000	000	000	+00	000	000	000	000
Paracladius conversus	000	000	000	000	000	000	++0	000
Rheocricotopus sp.	00+	000	000	000	000	++0	000	0+0
Synorthocladus semivirens	000	0+0	000	000	000	000	000	+00
Chaetocladus sp.	000	000	000	+00	000	000	000	000
Epoicocladus flavens	000	0+0	+00	000	000	000	00+	+00
Limnophyes sp.	000	00+	000	000	000	+00	000	000
Metriocnemus sp.	000	00+	000	000	000	00+	000	000
Parakiefferiella sp.	000	000	000	000	000	000	+00	000
Parametriocnemus stylatus	000	000	+00	000	0++	000	000	000
Paratrissocladus excerpitus	000	000	000	000	0++	000	000	000
Thienemanniella sp.	000	000	000	0+0	000	000	000	000
Orthocladus lignicola	000	000	000	000	0+0	000	000	000
Cricotopus group	+0+	+++	0+0	++0	+++	000	++0	+++
Tvetenia calvescens	+0+	0++	0+0	++0	0+0	0+0	+++	+++
Tvetenia discoloripes group	000	000	+++	000	000	000	000	000
Prodiamesa olivacea	0+0	++0	000	+0+	+00	000	0+0	++0
Chironomus sp.	0+0	000	000	000	000	0++	00+	000
Demicryptochironomus vulneratus	+00	000	000	000	000	000	000	000
Endochironomus sp.	000	000	000	000	00+	000	000	000
Dicrotendipes sp.	0+0	000	+00	+00	000	000	000	000
Microtendipes sp.	00+	+0+	000	+00	+++	000	+++	0++
Paracladopelma sp.	000	000	000	+00	00+	000	000	+00
Paratendipes sp.	000	000	000	000	000	000	000	0+0
Polypedilum sp.	++0	0+0	+++	+++	+0+	+0+	+0+	+++
Phaenopsectra sp.	000	00+	000	000	000	000	000	000
Cladotanytarsus sp.	000	000	000	+00	000	000	00+	000
Micropsectra sp.	++0	0++	+++	00+	0+0	0+0	0+0	+++
Paratanytarsus sp.	0+0	+++	0++	0+0	0++	000	00+	0+0
Tanytarsus sp.	+++	0+0	00+	++0	0+0	0+0	+++	0++
Tanytarsus brundini	000	000	000	+00	000	000	+00	000
Rheotanytarsus sp.	0+0	000	+0+	000	0+0	000	+00	++0
Micropsectra group	000	+00	000	000	00+	00+	000	000
Simulium (Nevermannia) vernum group	000	000	000	+00	000	000	000	000
Simulium (Nevermannia) cryophilum group	000	000	000	+00	000	000	000	000
Simulium (Nevermannia) angustitarse group	000	0+0	00+	+++	00+	000	000	0++
Simulium (Eusimulium) aureum group	00+	0+0	000	000	000	000	000	000
Simulium (Wilhelmia) sp.	+++	000	000	000	000	000	00+	0++
Simulium (Simulium) ornatum group	+0+	++0	+++	+++	+00	+++	00+	++0
Empididae	000	000	000	000	000	0+0	000	0+0
Chelifera group	000	+00	+00	0+0	000	+00	000	000
Hemerodromia group	000	+00	000	000	+00	000	+00	+00
Dolichopodidae	000	000	000	+00	000	000	000	000
Atherix ibis	00+	000	000	+0+	+00	000	000	000
Chrysops sp.	000	+00	000	+00	000	000	000	000
Ephydriidae	000	000	000	+00	000	000	000	000
Phaeonia group	000	0+0	000	000	000	000	000	000
Limnophora sp.	000	000	000	00+	000	000	000	00+

Appendix J Full taxon lists for each new site sampled by Welsh region. The three columns for each site represent spring, summer and autumn.

+ = taxon present and 0 = taxon absent from sample.

1 R. CYNFAL	PONT NEWYDD	27 MAR 1990 12 JUL 1990 02 OCT 1990
2 R. SEIONT	PONT Y GROMLECH	29 MAR 1990 12 JUL 1990 25 SEP 1990
3 R. CASEG	BRAICHMELYN	28 MAR 1990 13 JUL 1990 24 OCT 1990
4 R. BRAINT	PONT MYNACH	27 MAR 1990 06 JUL 1990 25 SEP 1990
5 MORLAS BROOK	D/S GLYN MORLAS	09 APR 1990 19 JUL 1990 17 OCT 1990

	1	2	3	4	5
Crenobia alpina	000	+0+	000	000	00+
Valvata piscinalis	000	000	000	+++	000
Potamopyrgus jenkinsi	000	000	0++	+++	+++
Lymnaea peregra	000	000	000	0+0	000
Gyraulus albus	000	000	000	00+	000
Armiger crista	000	000	000	00+	000
Bathymphalus contortus	000	000	000	00+	000
Ancylus fluviatilis	000	000	+++	+++	0++
Pisidium sp.	000	000	000	000	00+
Pisidium nitidum	000	000	000	+++	000
Specaria josinae	000	000	000	+00	000
Nais sp.	+00	000	000	000	000
Nais communis group	0+0	000	0+0	000	000
Nais alpina	0++	0++	0++	+00	0+0
Nais barbata	000	000	000	+00	000
Nais elinguis	000	000	000	+00	+00
Spirosperma ferox	0+0	000	0+0	000	000
Potamothenrix bavaricus	000	000	000	0++	000
Rhyacodrilus coccineus	000	000	000	+++	+++
Enchytraeus group	+++	+00	+++	000	+++
Lumbriculus variegatus group	+++	000	000	+++	000
Stylodrilus sp.	000	000	000	0+0	000
Stylodrilus heringianus	+00	000	000	000	+++
Lumbricidae	+00	0+0	000	000	000
Eiseniella tetraedra	000	000	+++	0+0	0+0
Theromyzon tessulatum	000	000	000	00+	000
Glossiphonia complanata	000	000	000	+++	000
Helobdella stagnalis	000	000	000	+00	00+
Erpobdella octoculata	000	000	00+	+00	000
Hydracarina	0+0	0++	+++	+00	+00
Asellus aquaticus	000	000	000	000	+00
Asellus meridianus	000	000	000	00+	000
Crangonyx pseudogracilis	00+	000	000	+0+	000
Gammarus pulex	000	000	+++	+++	+++
Baetis scambus group	000	00+	000	000	000
Baetis vernus	0+0	0++	000	000	000
Baetis rhodani	+++	+0+	+++	+++	+++
Baetis muticus	000	000	+00	000	000
Centroptilum luteolum	000	000	000	+0+	000
Rhithrogena semicolorata group	000	+00	+0+	+00	+00
Heptagenia lateralis	000	+++	+00	000	000
Ecdyonurus sp.	+0+	000	+++	+00	+++
Leptophlebiidae	00+	000	000	00+	000
Leptophlebia marginata	+00	000	000	000	000
Ephemerella ignita	0+0	000	0+0	0+0	0+0
Caenis luctuosa group	000	000	000	+++	000
Caenis rivulorum	000	000	+++	+00	000
Brachyptera risi	+00	000	000	000	000
Protonemura meyeri	+0+	000	+0+	000	000
Amphinemura sulcicollis	+00	+00	+0+	000	000
Nemoura cambrica group	000	000	000	000	+00
Leuctra geniculata	000	000	000	+00	000
Leuctra inermis	+00	+00	+0+	000	000
Leuctra hippopus	000	00+	00+	000	000
Leuctra nigra	+00	000	000	000	000
Leuctra fusca	+++	0+0	0+0	0++	0+0
Leuctra moselyi	000	0+0	000	000	000
Perlodes microcephala	00+	00+	000	000	00+
Isoperla grammatica	+0+	+++	+0+	+++	+0+
Dinocras cephalotes	000	000	+0+	000	000
Perla bipunctata	000	000	+00	000	000
Chloroperla torrentium	+00	+00	+00	000	000
Chloroperla tripunctata	+00	00+	+++	000	000

Appendix J (contd)

	1	2	3	4	5
Velia sp.	0+0	000	000	000	000
Sigara venusta	000	000	000	+00	000
Brychius elevatus	000	000	000	0++	000
Potamonectes sp.	000	000	000	0+0	000
Oreodytes sanmarkii	0+0	000	+++	+++	+++
Orectochilus villosus	000	000	000	+00	+00
Hydraena riparia	000	000	000	+0+	000
Hydraena gracilis	000	000	+++	+++	000
Helophorus brevipalpis	+00	000	000	0+0	000
Helophorus grandis	+00	000	000	000	000
Elodes sp.	000	000	00+	000	000
Elmis aenea	+++	+00	+++	+++	+0+
Esolus parallelepipedus	000	000	+++	00+	0++
Limnius volckmari	+++	+++	+0+	+++	+++
Oulimnius sp.	000	0+0	000	000	000
Oulimnius tuberculatus	+++	00+	000	+++	000
Rhyacophila sp.	000	000	000	00+	000
Rhyacophila dorsalis	+++	+0+	+++	000	+++
Glossosoma sp.	000	000	+++	0+0	000
Agapetus sp.	000	000	+00	+++	+00
Wormaldia sp.	000	0+0	+00	000	000
Polycentropodidae	+00	000	000	000	000
Plectrocnemia conspersa	000	+00	000	000	000
Plectrocnemia geniculata	000	+00	000	000	000
Polycentropus flavomaculatus	0+0	+0+	000	+++	000
Polycentropus kingi	000	0++	0++	000	000
Cyrnus trimaculatus	000	000	000	+00	000
Lype sp.	000	000	000	+00	000
Hydropsyche pellucidula	000	000	000	+0+	000
Hydropsyche instabilis	000	000	+0+	000	+0+
Hydropsyche siltalai	+++	+++	+++	+++	00+
Hydroptila sp.	000	0+0	+00	000	000
Oxyethira sp.	000	000	00+	00+	000
Limnephilidae	000	000	00+	000	00+
Drusus annulatus	000	000	000	000	+00
Potamophylax latipennis	000	000	000	+00	000
Halesus sp.	+00	000	+00	000	+00
Halesus radiatus	000	000	000	+00	000
Chaetopteryx villosa	0+0	000	000	000	000
Odontocerum albicorne	000	000	+00	000	000
Leptoceridae	000	000	000	0+0	000
Athripsodes sp.	000	000	000	00+	000
Athripsodes bilineatus	000	000	000	+00	000
Mystacides sp.	000	000	000	00+	000
Mystacides azurea	000	000	000	+00	000
Adicella reducta	000	000	0+0	000	000
Silo pallipes	000	000	0+0	000	00+
Lepidostoma hirtum	000	000	+++	+00	000
Sericostoma personatum	0+0	000	+++	+++	+00
Tipula oleracea	000	000	000	0+0	000
Dicranota sp.	0+0	0+0	+0+	0++	+++
Limnophila (Eloeophila) sp.	000	000	000	+00	000
Pericoma sp.	0+0	0+0	000	000	000
Pericoma blandula	000	000	00+	000	000
Pericoma neglecta	000	000	000	000	0+0
Pericoma pseudoexquisita	000	000	+00	000	000
Pericoma trivialis group	0+0	000	000	000	0+0
Dixa puberula	000	000	00+	000	000
Ceratopogonidae	0+0	000	000	+0+	000
Apsectrotanypus trifascipennis	000	000	000	000	0+0
Macropelopia sp.	000	000	000	000	00+
Thienemannimyia group	0+0	0+0	0+0	0+0	+00
Trissopelopia longimana	000	+++	0+0	000	000
Zavrelimyia sp.	+00	000	000	00+	000
Diamesinae	000	000	+00	000	000
Diamesa sp.	000	000	000	0+0	0++
Potthastia gaedii group	000	0++	000	000	000
Potthastia longimana group	0+0	000	000	+00	+00
Brillia modesta	0+0	+00	0+0	0++	+++
Cricotopus (Cricotopus) sp.	000	0++	000	000	000
Eukiefferiella sp.	+++	000	000	+00	000
Eukiefferiella breviculcar	000	000	000	000	00+
Eukiefferiella claripennis	000	000	000	000	0+0
Eukiefferiella clypeata	000	000	000	000	0+0
Eukiefferiella ilkleyensis	000	000	+00	000	000
Eukiefferiella minor	000	000	+00	000	000
Heterotrissocladius sp.	+00	000	0+0	000	000
Nanocladius sp.	000	000	000	00+	000
Orthocladius (Euorthocladius) rivulorum	000	000	+00	000	000
Orthocladius (Eudactylocadius) sp.	000	000	+00	000	000
Paratrachocladius sp.	000	000	+00	000	000
Psectrocladius sp.	+00	000	000	000	000

Appendix J (contd)

	1	2	3	4	5
Rheocricotopus sp.	000	000	000	000	+0+
Synorthocladus semivirens	000	000	000	000	++0
Chaetocladus melaleucus	000	0+0	000	000	000
Corynoneura sp.	000	000	000	00+	000
Paratrissocladus excerptus	000	000	000	00+	000
Pseudosmittia sp.	000	0++	000	000	000
Thienemanniella sp.	000	000	+00	000	0+0
Cricotopus group	+0+	+0+	++0	+0+	+00
Tvetenia sp.	+0+	000	00+	+0+	000
Tvetenia calvescens	000	+++	000	00+	++0
Tvetenia discoloripes group	000	000	++0	000	0+0
Prodiamesa olivacea	000	000	000	000	0+0
Polypedilum sp.	0+0	000	0+0	+0+	000
Phaenopsectra sp.	0+0	000	000	00+	000
Cladotanytarsus sp.	000	000	000	+00	000
Micropsectra sp.	000	0++	0+0	00+	0++
Paratanytarsus sp.	000	000	000	+++	000
Tanytarsus sp.	000	000	000	00+	000
Tanytarsus brundini	000	000	0+0	00+	000
Rheotanytarsus sp.	000	000	++0	+00	000
Micropsectra group	0+0	000	000	0+0	000
Bibionidae	000	000	000	000	00+
Simulium (Nevermannia) verum group	+00	000	000	000	000
Simulium (Nevermannia) cryophilum group	0+0	+00	+00	000	000
Simulium (Eusimulium) aureum group	0+0	00+	0+0	0++	0++
Simulium (Wilhelmia) sp.	000	000	000	0+0	000
Simulium (Simulium) argyreatum group	0+0	00+	++0	000	000
Simulium (Simulium) variegatum	000	000	00+	000	000
Simulium (Simulium) ornatum group	000	0++	000	0+0	++0
Empididae	000	0+0	000	000	0+0
Chelifera group	000	000	000	0+0	+00
Hemerodromia group	000	000	000	+00	00+
Wiedemannia group	+0+	+0+	0++	000	+00
Atherix marginata	000	000	00+	000	000
Limnophora sp.	000	000	00+	0+0	000

Appendix K Full taxon lists for five new sites in the lower catchment of the River Cam, sampled during the Headwaters Project. The three columns for each site represent spring, summer and autumn.

+ = taxon present and 0 = taxon absent from sample.

1 MILL RIVER	WENDY	30 APR 1991	23 JUL 1991	11 NOV 1991
2 RIVER GRANTA	HILDERSHAM	07 MAY 1991	26 JUN 1991	15 OCT 1991
3 REACH LODE	UPWARE LOCK	13 MAY 1991	04 JUN 1991	16 OCT 1991
4 RIVER RHEE	HARSTON	30 APR 1991	22 JUL 1991	11 NOV 1991
5 RIVER CAM	HAUXTON MILL	07 MAY 1991	23 JUL 1991	13 NOV 1991

	1	2	3	4	5
Polycelis nigra group	000	000	+++	0+0	000
Dugesia tigrina	000	000	++0	000	000
Dugesia polychroa group	000	000	000	0+0	00+
Dendrocoelum lacteum	000	000	+0+	000	000
Valvata cristata	000	000	000	000	+00
Valvata piscinalis	00+	00+	+0+	0+0	+0+
Potamopyrgus jenkinsi	+++	+++	+00	00+	+0+
Bithynia tentaculata	000	000	+++	000	+++
Bithynia leachii	000	000	+++	0+0	+0+
Lymnaea stagnalis	00+	+00	000	+00	+++
Lymnaea peregra	0++	0+0	00+	0++	+++
Physa sp.	000	0+0	000	000	000
Physa fontinalis	00+	00+	00+	+++	+0+
Planorbis carinatus	000	000	+0+	000	000
Anisus vortex	+++	+++	0+0	+++	+0+
Gyraulus albus	000	00+	000	+00	0++
Armiger crista	+0+	000	00+	000	000
Bathymorphus contortus	0++	+++	000	000	+0+
Hippeutis complanatus	000	000	+00	000	000
Acroloxus lacustris	000	000	+++	000	000
Ancylus fluviatilis	0++	000	000	+0+	0+0
Unio sp.	000	000	+00	000	000
Sphaerium corneum	0++	+++	+++	0+0	+++
Sphaerium lacustre	000	0+0	0+0	000	000
Pisidium amnicum	000	000	00+	000	000
Pisidium casertanum	+00	+00	000	+00	000
Pisidium milium	000	+0+	000	000	000
Pisidium subtruncatum	+0+	+++	+++	+0+	00+
Pisidium supinum	000	000	0+0	000	000
Pisidium henslowanum	000	0+0	0++	000	+00
Pisidium nitidum	00+	+++	+00	+++	+00
Ophidonais serpentina	000	000	+++	000	000
Nais communis group	+00	000	000	000	000
Nais elinguis	000	+00	000	+00	000
Slavina appendiculata	000	0+0	000	000	000
Stylaria lacustris	+00	000	0+0	+0+	+0+
Tubificidae	000	00+	0+0	000	0+0
Tubifex tubifex	00+	++0	000	000	000
Psammoryctides barbatus	0++	+++	000	0++	0++
Limnodrilus hoffmeisteri	+++	++0	00+	0+0	0++
Spirosperma velutinus	000	+00	000	000	000
Haber simsi	000	+00	000	000	000
Potamothenix hammoniensis	+++	+00	+00	0+0	00+
Rhyacodrilus coccineus	000	++0	000	0+0	000
Aulodrilus plurisetia	+++	000	000	0++	0++
Lumbriculus variegatus group	00+	+00	+00	0++	+00
Stylodrilus heringianus	000	000	000	+0+	000
Piscicola geometra	000	000	0++	0+0	0+0
Theromyzon tessulatum	000	00+	000	000	000
Hemicleipsis marginata	000	000	000	000	00+
Glossiphonia heteroclita	000	000	00+	000	000
Glossiphonia complanata	0++	+++	000	00+	+++
Helobdella stagnalis	000	+00	0+0	0+0	0+0

Appendix K (contd)

	1	2	3	4	5
Erpobdella octoculata	0++	+++	+++	0++	+++
Hydracarina	00+	+++	00+	+0+	00+
Asellus aquaticus	0++	+++	+++	+++	+++
Crangonyx pseudogracilis	000	+00	+++	+++	0++
Gammarus pulex	0++	+++	000	+++	+0+
Baetis vernus	+00	000	000	+00	000
Centroptilum luteolum	+00	000	000	00+	000
Cloeon dipterum	000	000	+++	+0+	+0+
Cloeon simile	000	000	0+0	000	000
Paraleptophlebia submarginata	+0+	000	000	000	000
Habrophlebia fusca	+00	000	000	000	000
Ephemerella ignita	0+0	+0+	000	+0+	000
Ephemerella vulgata	000	000	+0+	000	000
Ephemerella danica	+++	000	000	000	000
Caenis luctuosa group	+++	+++	000	+++	+++
Caenis robusta	000	000	+00	000	000
Coenagriidae	000	000	000	00+	000
Ischnura elegans	+00	000	+0+	+00	+0+
Enallagma cyathigerum	000	000	0+0	000	000
Erythronma najas	000	000	+00	000	000
Calopteryx splendens	+00	000	000	00+	+00
Nepa cinerea	00+	000	000	000	000
Notonecta sp.	000	000	+00	+0+	000
Notonecta glauca	000	00+	0++	+0+	000
Notonecta maculata	000	000	000	00+	000
Micronecta sp.	000	000	+00	000	000
Sigara (Sigara) sp.	+00	000	0++	0++	+++
Sigara falleni	000	000	0+0	0++	000
Brychius elevatus	00+	000	000	000	000
Haliphus sp.	00+	000	000	000	000
Haliphus lineatocollis	000	0++	000	000	000
Haliphus fluviatilis	0+0	000	+0+	000	0+0
Haliphus immaculatus	000	000	0+0	000	000
Haliphus laminatus	000	00+	000	000	000
Haliphus wehnckeii	000	00+	000	000	000
Laccophilus sp.	000	000	000	000	0+0
Laccophilus hyalinus	000	000	+++	000	000
Potamonectes sp.	+0+	000	000	000	0+0
Potamonectes depressus	000	0++	000	0++	+00
Stictotarsus duodecimpustulatus	000	000	00+	000	000
Agabus sp.	000	+00	000	+00	000
Agabus didymus	000	0+0	000	000	000
Platambus maculatus	0++	000	00+	0+0	000
Gyrinus marinus	000	000	0++	000	000
Orectochilus villosus	00+	000	000	00+	000
Hydrophilidae (incl. Hydraenidae)	000	0+0	000	000	000
Elmis aenea	00+	+++	000	+++	000
Limnius volckmari	000	000	000	00+	000
Oulimnius sp.	00+	0+0	00+	+++	00+
Oulimnius tuberculatus	000	00+	000	000	0+0
Sialis lutaria	0++	00+	0++	00+	0++
Polycentropus flavomaculatus	000	000	000	+++	00+
Cyrnus sp.	000	000	00+	000	000
Tinodes waeneri	000	000	000	000	0++
Hydropsyche pellucidula	00+	000	000	00+	000
Hydropsyche angustipennis	00+	00+	000	000	000
Hydropsyche siltalai	000	000	000	00+	000
Hydroptila sp.	+0+	+00	000	+0+	+0+
Limnephilidae	00+	000	000	00+	000
Limnephilus marmoratus	000	000	+00	000	000
Limnephilus lunatus group	0+0	+0+	000	+0+	+00
Limnephilus extricatus	000	00+	000	000	000
Halesus sp.	000	+00	000	000	000
Halesus radiatus	000	000	000	+00	000
Halesus digitatus	+00	000	000	000	+00
Chaetopteryx villosa	000	000	000	+00	000
Molanna angustata	000	000	000	+0+	+0+
Athripsodes aterrimus	000	000	+0+	00+	+0+
Athripsodes cinereus	000	000	000	+++	000
Athripsodes albifrons	000	000	000	+++	000
Mystacides nigra	000	000	00+	000	000
Mystacides azurea	00+	+00	+00	0++	+++
Mystacides longicornis	000	000	+00	000	000

Appendix K (contd)

	1	2	3	4	5
Oecetis lacustris	000	000	0+0	000	000
Ceraclea senilis	000	000	+00	000	000
Goera pilosa	0++	00+	000	+++	000
Brachycentrus subnubilus	000	000	000	00+	000
Parapoynx sp.	000	000	0++	000	000
Non-gilled Pyralidae	000	00+	+0+	000	000
Tipula montium group	00+	0++	000	000	000
Phylidorea sp.	000	000	000	000	+00
Pilaria (Pilaria) sp.	00+	+00	000	000	000
Psychodidae	000	00+	000	000	+00
Pericoma sp.	000	+00	000	000	000
Anopheles atroparvus group	000	000	0+0	000	000
Ceratopogonidae	++0	++0	000	+0+	+00
Tanypus sp.	000	000	0+0	000	000
Apsectrotanypus trifascipennis	00+	000	000	0+0	000
Macropelopia sp.	000	000	000	0+0	000
Procladius sp.	++0	+++	+0+	0++	0++
Clinotanypus nervosus	000	000	+0+	000	000
Ablabesmyia sp.	+00	000	000	+0+	000
Conchapelopia sp.	000	+00	000	000	000
Thienemannimyia group	+00	000	000	+0+	+0+
Potthastia longimana group	000	000	000	000	+0+
Brillia longifurca	000	000	000	00+	000
Cricotopus (Cricotopus) sp.	0+0	000	000	000	0+0
Cricotopus (Isocladius) sp.	000	0+0	+++	000	0+0
Nanocladius bicolor	+00	000	000	+00	000
Paracladius conversus	000	0+0	000	000	000
Psectrocladius sp.	000	000	00+	000	000
Rheocricotopus sp.	000	000	000	+00	000
Chaetocladius sp.	+00	+00	000	+00	000
Corynoneura sp.	000	000	000	00+	000
Limnophyes sp.	000	+00	+00	000	000
Metriocnemus sp.	+0+	000	000	000	+0+
Cricotopus group	+00	+00	+00	+0+	000
Tvetenia calvescens	000	+00	000	000	000
Prodiamesa olivacea	++0	0+0	000	000	000
Chironomus sp.	0+0	0+0	00+	000	000
Cryptochironomus sp.	000	+00	000	+00	000
Endochironomus sp.	000	000	0++	000	000
Glyptotendipes sp.	000	000	+++	000	000
Dicrotendipes sp.	000	000	+++	000	000
Microtendipes sp.	+++	0++	0++	0++	0++
Parachironomus sp.	+00	000	+00	000	000
Paratendipes sp.	000	+00	000	0+0	0+0
Polypedilum sp.	+00	00+	++0	+00	0+0
Phaenopsectra sp.	0+0	000	000	0+0	000
Micropsectra sp.	0+0	+00	000	+++	000
Paratanytarsus sp.	+00	000	0+0	0+0	0++
Tanytarsus sp.	+0+	0+0	+00	0+0	0+0
Tanytarsus brundini	000	0+0	000	000	000
Stempellina bausei	+00	+00	000	000	000
Simulium (Nevermannia) angustitarse group	0++	000	000	000	000
Oxycera trilineata	000	0+0	000	000	000
Empididae	000	0+0	000	000	0+0
Ephydriidae	000	+00	000	000	000

Appendix L Full taxon lists for five new sites in the lower catchment of the River Derwent, sampled during the Headwaters Project. The three columns for each site represent spring, summer and autumn.
+ = taxon present and 0 = taxon absent from sample.

1 HOLBECK	HOVINGHAM CARRS	02 MAY 1991 15 AUG 1991 23 OCT 1991
2 PICKERING BECK	LEVISHAM	18 APR 1991 15 AUG 1991 23 OCT 1991
3 RIVER SEPH	LASKILL	24 APR 1991 05 AUG 1991 23 OCT 1991
4 MENETHORPE BECK	MENETHORPE	02 MAY 1991 05 AUG 1991 23 OCT 1991
5 RIVER RYE	NUNNINGTON	02 MAY 1991 02 AUG 1991 23 OCT 1991

	1	2	3	4	5
Polycelis felina	000	+++	+00	000	000
Dendrocoelum lacteum	000	000	000	000	0+0
Theodoxus fluviatilis	000	000	000	000	+0+
Potamopyrgus jenkinsi	+++	000	00+	+++	+++
Lymnaea peregra	+++	000	000	0++	+0+
Ancylus fluviatilis	+++	000	+0+	+0+	+++
Sphaerium corneum	+++	000	000	000	000
Pisidium sp.	00+	000	0+0	00+	0+0
Pisidium amnicum	000	000	000	000	+00
Pisidium personatum	000	+00	000	000	000
Pisidium subtruncatum	000	000	000	+00	000
Pisidium nitidum	+00	000	000	+00	000
Ophidonais serpentina	+00	000	000	000	000
Nais alpina	000	0+0	0+0	00+	000
Nais elinguis	+00	000	0++	000	000
Nais pardalis	000	000	0++	000	+00
Stylaria lacustris	00+	000	000	000	00+
Tubificidae	+00	0++	+++	000	000
Tubifex tubifex	000	000	000	0+0	000
Psammoryctides barbatus	+++	000	000	+00	0+0
Limnodrilus hoffmeisteri	+0+	000	000	+++	+++
Limnodrilus udekemianus	000	+00	000	000	000
Potamothenix hammoniensis	000	000	000	00+	000
Rhyacodrilus coccineus	00+	+00	000	+0+	+0+
Aulodrilus plurisetia	0++	0++	000	00+	000
Enchytraeus group	000	000	+0+	000	+00
Lumbriculus variegatus group	000	000	000	+00	000
Stylocladus sp.	000	00+	+00	+00	000
Stylocladus heringianus	+++	+00	000	000	+++
Stylocladus lemani	00+	000	000	000	00+
Lumbricidae	000	0+0	000	0+0	000
Eiseniella tetraedra	000	00+	+++	+00	0+0
Pisicicola geometra	00+	000	000	+00	000
Glossiphonia complanata	+++	000	000	0++	+00
Erpobdella octoculata	+++	000	000	+0+	+00
Hydracarina	+++	000	000	00+	+00
Asellus meridianus	+00	000	000	000	000
Gammarus pulex	+++	+++	000	+++	+++
Austropotamobius pallipes	00+	000	000	000	000
Baetis scambus group	000	000	000	+00	0+0
Baetis vernus	0++	000	000	+00	0++
Baetis buceratus	000	000	000	000	+00
Baetis rhodani	+++	+++	+++	+0+	+00
Baetis muticus	000	+00	000	000	+00
Baetis niger	000	+0+	000	000	000
Centroptilum luteolum	0+0	00+	000	0+0	000
Rhithrogena semicolorata group	+00	+++	+0+	000	+0+
Heptagenia sulphurea	000	000	000	000	+0+
Ecdyonurus sp.	+0+	+++	+++	000	+++
Paraleptophlebia submarginata	00+	00+	000	000	000
Habrophlebia fusca	+00	000	000	+00	000
Ephemerella ignita	0+0	0+0	0+0	+++	0+0
Ephemerella notata	000	000	000	000	+00

Appendix L (contd)

	1	2	3	4	5
Ephemera danica	+++	+++	++0	+++	++0
Caenis luctuosa group	00+	000	000	000	000
Caenis rivulorum	+00	000	000	000	+00
Taeniopteryx nebulosa	000	000	00+	00+	00+
Brachyptera risi	000	+00	+00	000	000
Protonemura sp.	000	0+0	000	000	000
Protonemura praecox	000	000	00+	000	000
Protonemura meyeri	000	+0+	+0+	000	000
Amphinemura sulcicollis	000	+00	+00	000	000
Nemoura avicularis	000	0++	000	000	000
Leuctra geniculata	000	000	000	++0	++0
Leuctra inermis	000	+00	+00	000	000
Leuctra hippopus	000	+0+	000	000	000
Leuctra nigra	000	0+0	000	000	000
Leuctra fusca	000	0+0	0++	000	0+0
Perlodes microcephala	000	000	000	000	00+
Isoperla grammatica	000	+00	+00	000	+00
Dinocras cephalotes	000	+00	000	000	000
Chloroperla torrentium	000	+00	+00	000	000
Chloroperla tripunctata	000	000	00+	000	000
Brychius elevatus	+++	000	000	0+0	+0+
Haliphus lineatocollis	00+	000	000	000	000
Potamonectes sp.	0+0	000	000	0+0	000
Stictotarsus duodecimpustulatus	000	000	000	0+0	000
Oreodytes sanmarkii	++0	0+0	0+0	+++	000
Agabus paludosus	000	000	000	0+0	000
Platambus maculatus	0++	0+0	000	0++	0++
Ilybius sp.	00+	000	000	00+	000
Ilybius fuliginosus	000	000	000	0+0	000
Orectochilus villosus	++0	000	+00	000	+00
Hydraena gracilis	000	+++	+++	000	000
Helophorus brevipalpis	0+0	0+0	000	000	000
Anacaena globulus	000	+00	000	000	000
Elodes sp.	00+	+00	000	000	000
Elmis aenea	+++	+++	+++	+++	+++
Esolus parallelepipedus	000	0+0	0+0	000	0++
Limnius volckmari	+++	+++	+++	+0+	+++
Oulimnius sp.	000	000	000	0+0	0+0
Oulimnius tuberculatus	+++	+00	0++	000	00+
Riolus subviolaceus	000	000	000	+++	00+
Sialis lutaria	++0	000	000	+00	000
Sialis fuliginosa	000	00+	000	000	000
Rhyacophila dorsalis	000	+++	+++	0++	+00
Rhyacophila oblitterata	000	0+0	000	000	000
Glossosoma sp.	000	+00	0++	000	000
Agapetus sp.	+++	000	00+	000	+++
Polycentropus sp.	000	000	000	0+0	000
Polycentropus flavomaculatus	000	00+	00+	000	+++
Hydropsyche sp.	000	000	0+0	000	0+0
Hydropsyche pellucidula	+++	0+0	00+	000	+0+
Hydropsyche instabilis	000	+0+	+0+	+00	000
Hydropsyche siltalai	+00	+00	+0+	+0+	000
Hydroptila sp.	0+0	000	000	+00	000
Limnephilidae	000	000	0+0	000	000
Drusus annulatus	+00	000	+00	+00	000
Ecclisopteryx guttulata	000	+00	+0+	000	000
Limnephilus sp.	+00	000	000	000	000
Potamophylax sp.	000	00+	000	000	000
Potamophylax latipennis	000	000	000	00+	000
Halesus sp.	000	0+0	000	000	000
Halesus radiatus	+00	000	000	000	000
Melampophylax mucoreus	000	000	000	+00	000
Hydatophylax infumatus	000	00+	000	000	000
Odontocerum albicorne	000	0+0	000	000	000
Athripsodes sp.	00+	000	0+0	000	0++
Athripsodes albifrons	000	000	000	000	+00
Athripsodes bilineatus	+00	000	+00	000	+00
Mystacides azurea	+00	000	000	000	000
Goera pilosa	+00	000	000	000	000
Silo pallipes	000	+00	+0+	000	000
Lepidostoma hirtum	+0+	00+	+0+	00+	+++
Brachycentrus subnubilus	000	0+0	0+0	000	0++
Sericostoma personatum	+00	++0	+++	+++	++0

Appendix L (contd)

	1	2	3	4	5
Tipula montium group	00+	000	000	0++	000
Dicranota sp.	++0	+++	+++	+++	+++
Limnophila (Eloeophila) sp.	+00	++0	000	+00	000
Pilaria (Pilaria) sp.	00+	000	000	00+	000
Pericoma trivialis group	00+	000	000	000	000
Ceratopogonidae	0++	000	000	+00	+0+
Apsectrotanypus trifascipennis	+0+	000	000	000	000
Macropelopia sp.	000	0++	000	0++	000
Procladius sp.	++0	000	000	000	000
Ablabesmyia sp.	0+0	000	000	0+0	000
Paramerina sp.	000	000	000	000	0+0
Thienemannimyia group	++0	0+0	000	0++	00+
Trissopelopia longimana	000	0+0	000	000	000
Zavreliomyia sp.	000	000	000	0+0	000
Potthastia longimana group	+00	000	+++	+00	000
Brillia longifurca	000	+00	000	000	000
Brillia modesta	+0+	0++	0++	000	000
Cricotopus (Cricotopus) sp.	0+0	000	000	0+0	+00
Cricotopus (Cricotopus) trifascia	0+0	000	000	+00	+00
Cricotopus (Isocladius) sp.	000	000	000	000	0++
Eukiefferiella breviculcar	000	00+	00+	000	000
Eukiefferiella claripennis	++0	++0	++0	000	+00
Eukiefferiella clypeata	000	000	+00	000	000
Eukiefferiella ilkleyensis	000	000	++0	000	0+0
Eukiefferiella gracei	000	000	000	+00	000
Eukiefferiella minor	0+0	000	000	000	000
Heterotrissocladius sp.	+00	000	000	000	000
Nanocladius rectinervis	000	000	000	000	+00
Orthocladius (Euorthocladius) rivulorum	000	000	+00	000	000
Orthocladius (Euorthocladius) thienemanni	000	000	+00	000	000
Paratrachocladius sp.	000	000	+00	000	000
Rheocricotopus sp.	+00	+00	00+	0+0	+00
Synorthocladius semivirens	000	000	0+0	00+	00+
Chaetocladius sp.	+00	000	000	000	000
Corynoneura sp.	00+	000	000	000	000
Epoicocladius flavens	000	000	000	0+0	000
Heleniella ornaticollis	000	+00	000	000	000
Parametriocnemus stylatus	000	000	+00	000	000
Thienemanniella sp.	+++	0+0	00+	000	+++
Orthocladius lignicola	000	000	00+	000	000
Cricotopus group	++0	0+0	++0	+++	+00
Tvetenia calvicens	+++	++0	++0	+++	+++
Tvetenia discoloripes group	000	0++	+++	000	000
Prodiamesa olivacea	000	000	0+0	0+0	0+0
Microtendipes sp.	+0+	000	000	000	00+
Paratendipes sp.	++0	000	000	000	000
Polypedilum sp.	+00	0++	0+0	000	+00
Cladotanytarsus sp.	+00	000	000	0+0	+00
Micropsectra sp.	0++	0++	00+	0++	+00
Paratanytarsus sp.	+++	000	000	0++	+00
Tanytarsus sp.	+++	0+0	000	0+0	000
Tanytarsus brundini	0+0	0+0	0+0	0++	+00
Rheotanytarsus sp.	000	000	+++	00+	+00
Prosimulium tomosvaryi	000	+00	000	000	000
Simulium (Nevermannia) cryophilum group	000	0++	0+0	000	000
Simulium (Nevermannia) angustitarse group	00+	000	000	000	000
Simulium (Eusimulium) aureum group	000	000	000	000	00+
Simulium (Wilhelmia) sp.	0+0	000	000	000	0++
Simulium (Simulium) reptans group	000	000	++0	000	+00
Simulium (Simulium) argyreatum group	000	0+0	0+0	000	000
Simulium (Simulium) ornatum group	+++	0+0	000	+00	0++
Empididae	0+0	000	000	000	000
Chelifera group	+00	+00	+00	0+0	++0
Hemerodromia group	+00	000	++0	000	++0
Wiedemannia group	000	0+0	0++	+00	+00
Atherix ibis	00+	++0	++0	000	+++
Limnophora sp.	0+0	000	000	000	000

Appendix M Full taxon lists for five new sites in the lower catchment of the River Lugg, sampled during the Headwaters Project. The three columns for each site represent spring, summer and autumn.

+ = taxon present and 0 = taxon absent from sample.

1 BACK BROOK	KINGTON	03 APR 1991	29 JUL 1991	22 OCT 1991
2 CURL BROOK	PEMBRIDGE	03 APR 1991	29 JUL 1991	22 OCT 1991
3 MAIN DITCH	LEOMINSTER	03 APR 1991	29 JUL 1991	22 OCT 1991
4 HINDWELL BROOK	COMBE	03 APR 1991	29 JUL 1991	22 OCT 1991
5 RIVER LUGG	MORDIFORD	19 APR 1991	31 JUL 1991	24 OCT 1991

	1	2	3	4	5
Planaria torva	000	000	000	000	+++
Polycelis nigra group	0+0	000	+00	000	0+0
Polycelis felina	00+	000	000	000	000
Dugesia polychroa group	000	000	000	000	0+0
Dendrocoelum lacteum	000	000	000	000	00+
Chordodidae	000	000	+00	000	+00
Theodoxus fluviatilis	000	000	000	000	+++
Valvata piscinalis	000	0+0	0++	000	+00
Potamopyrgus jenkinsi	+++	+++	+++	+00	+++
Bithynia tentaculata	000	000	000	000	+++
Lymnaea palustris	000	000	+0+	000	000
Lymnaea stagnalis	000	000	+00	000	000
Lymnaea peregra	+++	00+	+0+	+00	+++
Physa fontinalis	000	000	+00	000	+0+
Planorbis carinatus	000	000	000	000	00+
Anisus vortex	000	000	+++	000	000
Gyraulus albus	000	000	000	000	+00
Bathymphalus contortus	000	000	+00	000	000
Ancylus fluviatilis	000	+++	000	+0+	+++
Succinea sp.	000	000	0+0	000	000
Zonitoides nitidus	000	000	00+	000	000
Sphaerium corneum	000	0+0	+00	000	+++
Pisidium sp.	000	000	000	+00	000
Pisidium amnicum	000	000	000	000	+00
Pisidium casertanum	000	+++	000	000	000
Pisidium personatum	000	0+0	000	000	000
Pisidium subtruncatum	000	+0+	000	000	000
Pisidium henslowanum	000	000	000	000	00+
Pisidium nitidum	000	+00	0+0	000	000
Tubificidae	000	000	000	000	+++
Psammoryctides barbatus	+00	+00	+++	000	000
Limnodrilus hoffmeisteri	000	000	+00	000	000
Spirosperma ferox	000	+00	000	000	00+
Rhyacodrilus coccineus	000	+++	+++	00+	+00
Enchytraeus group	000	+00	000	+++	000
Lumbriculus variegatus group	000	000	000	000	0+0
Stylodrilus sp.	0+0	+00	+00	+00	000
Stylodrilus heringianus	000	+++	000	00+	+++
Lumbricidae	00+	000	000	0++	+00
Eiseniella tetraedra	+00	000	000	000	0+0
Piscicola geometra	+00	000	0+0	000	000
Theromyzon tessulatum	+00	000	000	000	000
Glossiphonia complanata	+++	000	+++	+00	0+0
Erpobdellidae	000	00+	000	000	000
Erpobdella octoculata	000	0+0	+00	000	+++
Hydracarina	000	+++	+00	+00	0+0
Asellus aquaticus	000	000	+++	000	+++
Asellus meridianus	000	000	+00	000	000
Crangonyx pseudogracilis	000	000	000	000	00+
Gammarus pulex	+++	+++	+++	+++	+++
Baetis scambus group	000	000	000	000	0++
Baetis vernus	000	0++	00+	000	000
Baetis buceratus	000	000	000	000	+00

Appendix M (contd)

	1	2	3	4	5
Baetis rhodani	+++	++0	+++	+++	000
Baetis muticus	000	000	000	000	0+0
Baetis niger	000	000	000	+00	000
Centroptilum luteolum	000	+00	000	000	000
Centroptilum pennulatum	0+0	000	000	000	000
Rhithrogena semicolorata group	+0+	00+	000	+0+	00+
Heptagenia sulphurea	000	000	000	000	0++
Ecdyonurus sp.	0++	+0+	000	+++	0+0
Paraleptophlebia submarginata	000	+00	000	000	000
Habrophlebia fusca	000	+00	+00	000	000
Ephemerella ignita	0+0	0+0	0+0	0+0	0+0
Ephemerella danica	+00	+0+	+0+	+00	000
Brachycercus harrisella	000	000	000	+00	000
Caenis luctuosa group	++0	000	000	000	++0
Caenis rivulorum	+00	+00	000	+00	000
Taeniopteryx nebulosa	000	000	000	000	00+
Nemoura avicularis	000	+00	+0+	000	000
Nemoura cambrica group	+00	000	000	000	000
Leuctra fusca	0+0	000	000	000	000
Isoperla grammatica	+00	000	000	+00	+00
Chloroperla torrentium	000	000	000	+00	000
Pyrrhosoma nymphula	000	000	+00	000	000
Velia sp.	000	000	0+0	000	000
Aphelocheirus aestivalis	000	000	000	000	++0
Sigara (Sigara) sp.	000	000	+0+	000	000
Brychius elevatus	000	000	+++	000	000
Haliphus lineatocollis	000	000	00+	000	000
Oreodytes sanmarkii	000	0+0	000	+00	000
Platambus maculatus	0++	+0+	0+0	000	000
Orectochilus villosus	000	000	0+0	000	+0+
Hydrophilidae (incl. Hydraenidae)	000	000	000	000	+00
Hydraena rufipes	000	00+	000	000	000
Hydraena gracilis	00+	000	000	0++	000
Helophorus brevipalpis	000	000	0+0	000	000
Elodes sp.	000	000	00+	000	000
Elmis aenea	+++	+++	+++	+++	0++
Esolus parallelepipedus	0++	0+0	000	0++	+++
Limnius volckmari	0++	+++	0+0	+++	+++
Oulimnius sp.	000	+00	00+	000	0+0
Oulimnius tuberculatus	000	0+0	++0	000	000
Sialis lutaria	00+	+00	+0+	000	000
Sialis fuliginosa	+00	+00	000	000	000
Rhyacophila sp.	000	000	000	+00	0+0
Rhyacophila dorsalis	++0	00+	000	0++	00+
Agapetus sp.	+++	+++	++0	+00	000
Psychomyiidae (incl. Ecnomidae)	000	+00	000	000	000
Hydropsyche sp.	000	000	0++	000	000
Hydropsyche pellucidula	000	0++	000	+0+	+++
Hydropsyche angustipennis	000	000	+00	000	000
Hydropsyche contubernalis	000	000	000	000	++0
Hydropsyche instabilis	+00	000	000	+00	000
Hydropsyche siltalai	00+	000	+00	00+	00+
Cheumatopsyche lepida	000	000	000	000	+0+
Hydroptila sp.	000	000	000	000	++0
Apatania muliebris	0+0	000	000	000	000
Drusus annulatus	++0	000	000	000	000
Ecclisopteryx guttulata	+0+	000	000	000	000
Limnephilus sp.	000	000	00+	000	000
Limnephilus rhombicus	000	000	+00	000	000
Limnephilus lunatus group	000	+00	++0	000	000
Anabolia nervosa	000	+00	+00	000	000
Potamophylax sp.	000	00+	000	000	000
Potamophylax latipennis	+00	000	000	000	000
Halesus radiatus	000	+00	+00	+00	000
Halesus digitatus	000	0+0	000	000	000
Hydatophylax infumatus	00+	000	000	000	000
Odontocerum albicorne	000	0++	000	000	000
Athripsodes sp.	000	+00	000	000	000
Athripsodes albifrons	000	0+0	000	000	0+0
Athripsodes bilineatus	+00	000	000	+00	000
Mystacides nigra	000	000	+0+	000	000
Goeridae	000	+00	000	000	000
Goera pilosa	000	000	00+	000	000

Appendix M (contd)

	1	2	3	4	5
Silo pallipes	000	000	000	+0+	000
Silo nigricornis	000	0++	000	000	000
Lepidostoma hirtum	000	000	000	+00	+++
Lasiocephala basalis	000	000	000	+0+	000
Brachycentrus subnubilus	000	000	000	000	0++
Sericostoma personatum	+0+	++0	+++	+00	00+
Tipula montium group	00+	000	000	000	000
Tipula maxima	000	000	+00	000	000
Antocha vitripennis	000	000	000	000	0+0
Dicranota sp.	0++	+++	0+0	0+0	000
Limnophila (Eloeophila) sp.	000	000	000	+00	000
Pericoma sp.	000	+00	0+0	000	000
Ptychoptera sp.	000	+00	000	000	000
Dixa nebulosa	0+0	000	00+	000	000
Ceratopogonidae	+00	+00	+00	000	0++
Apsectrotanytus trifascipennis	+00	+00	000	000	000
Macropelopia sp.	000	++0	000	000	0+0
Natarsia sp.	000	+00	000	000	000
Thienemannimyia group	+00	+00	++0	000	0++
Zavrelimyia sp.	000	000	+00	000	000
Diamesa sp.	0++	0++	000	0+0	000
Potthastia longimana group	000	000	000	+00	000
Brillia modesta	000	0++	0+0	000	000
Cricotopus (Cricotopus) sp.	000	000	000	000	+00
Cricotopus (Cricotopus) trifascia	000	000	000	000	+00
Cricotopus (Isocladius) sp.	000	0+0	000	000	000
Eukiefferiella claripennis	0+0	0++	0+0	0+0	000
Eukiefferiella clypeata	000	000	000	000	0+0
Eukiefferiella ilkleyensis	000	0+0	000	000	0+0
Heterotrissocladius sp.	000	+00	000	000	000
Orthocladius (Euorthocladius) thienemanni	+00	000	000	+00	+00
Rheocricotopus sp.	000	000	000	+00	000
Chaetocladius sp.	000	000	00+	000	000
Corynoneura sp.	000	000	0++	000	000
Metriocnemus sp.	+00	000	0++	0+0	000
Parakiefferiella sp.	000	+00	000	000	000
Cricotopus group	+0+	+00	0+0	+00	++0
Tvetenia calvenscens	000	0+0	0+0	000	0++
Prodiamesa olivacea	+00	+00	000	000	000
Microtendipes sp.	000	000	00+	000	000
Paracladopelma sp.	000	000	+00	000	000
Paratendipes sp.	000	000	+00	000	000
Polypedilum sp.	000	000	000	+00	000
Xenochironomus xenolabis	000	000	000	000	00+
Cladotanytarsus sp.	000	+00	000	000	000
Micropsectra sp.	00+	0++	000	000	000
Paratanytarsus sp.	000	+00	+00	000	000
Tanytarsus sp.	000	000	+00	000	000
Tanytarsus brundini	000	+00	000	000	+00
Rheotanytarsus sp.	000	000	000	+00	++0
Simulium (Nevermannia) cryophilum group	000	+00	000	000	000
Simulium (Nevermannia) angustitarse group	000	000	+0+	000	000
Simulium (Eusimulium) aureum group	000	00+	+00	000	000
Simulium (Wilhelmia) sp.	0+0	0++	0+0	0+0	00+
Simulium (Wilhelmia) equinum	000	000	000	00+	0+0
Simulium (Wilhelmia) lineatum	000	000	000	000	0+0
Simulium (Simulium) reptans group	000	000	000	+00	++0
Simulium (Simulium) ornatum group	0++	0++	+++	+++	0+0
Nemotelus sp.	000	000	+00	000	000
Chelifera group	0+0	+00	000	000	000
Hemerodromia group	000	+00	0+0	+00	000
Dolichopodidae	+00	000	000	000	000
Atherix ibis	000	00+	+00	++0	0++
Tabanus group	+00	000	000	000	000
Syrphidae	000	0+0	000	000	000
Limnophora sp.	00+	000	000	000	000

Appendix N Full taxon lists for five new sites in the lower catchment of the River Stour, sampled during the Headwaters Project. The three columns for each site represent spring, summer and autumn.
 + = taxon present and 0 = taxon absent from sample.

1 RIVER ALLEN	WALFORD MILL	06 MAR 1991 27 JUN 1991 18 SEP 1992
2 RIVER CALE	SYLES FARM	02 MAY 1991 31 JUL 1991 18 SEP 1992
3 RIVER STOUR	TRILL BRIDGE	13 MAY 1991 12 AUG 1991 18 NOV 1991
4 RIVER LYDDEN	BAGBER BRIDGE	04 APR 1991 04 JUL 1991 17 OCT 1991
5 RIVER STOUR	SPETISBURY	25 MAR 1991 26 JUN 1991 09 OCT 1991

	1	2	3	4	5
Polycelis nigra group	000	000	000	00+	00+
Dugesia polychroa group	000	0++	000	000	000
Dendrocoelum lacteum	000	00+	000	000	00+
Chordodidae	000	+00	000	000	000
Theodoxus fluviatilis	000	000	+++	+++	+++
Valvata cristata	0+0	000	000	000	000
Valvata piscinalis	000	+++	+0+	+++	+++
Potamopyrgus jenkinsi	+++	+++	+++	+++	+0+
Bithynia tentaculata	000	+++	+0+	+++	+++
Bithynia leachii	000	000	000	00+	+0+
Lymnaea palustris	000	+00	000	000	000
Lymnaea stagnalis	000	+0+	0++	00+	00+
Lymnaea auricularia	000	000	000	000	00+
Lymnaea peregra	+00	+0+	+++	+++	+++
Physa fontinalis	000	+0+	+++	0++	0++
Planorbis sp.	000	0+0	000	000	000
Planorbis carinatus	000	+00	0++	+++	00+
Anisus vortex	+00	+0+	+++	000	+++
Gyraulus albus	+00	+0+	+++	+++	+++
Armiger crista	000	000	000	00+	000
Bathyomphalus contortus	000	0+0	000	+++	+++
Hippeutis complanatus	000	+00	000	00+	000
Acroloxus lacustris	000	+0+	000	+00	000
Ancylus fluviatilis	+0+	+0+	+0+	+++	+++
Succinea sp.	000	000	000	0+0	000
Anodonta group	000	000	000	0++	000
Sphaerium corneum	0+0	+++	+++	+++	+++
Pisidium personatum	000	000	+00	000	000
Pisidium obtusale	000	000	000	00+	000
Pisidium milium	000	000	000	0++	000
Pisidium subtruncatum	0+0	+++	+00	+0+	+00
Pisidium henslowanum	000	0++	+++	+00	000
Pisidium hibernicum	000	00+	000	000	000
Pisidium nitidum	+0+	+++	+00	+++	+++
Stylaria lacustris	000	000	000	00+	00+
Tubificidae	00+	+00	000	+0+	0+0
Psammoryctides barbatus	+0+	+0+	000	+++	0++
Limnodrilus hoffmeisteri	000	000	000	+00	000
Potamotheix hammoniensis	00+	00+	000	000	000
Rhyacodrilus coccineus	000	+00	+0+	00+	000
Aulodrilus pluriset	00+	0+0	000	00+	000
Lumbriculus variegatus group	000	000	000	000	0+0
Stylodrilus sp.	00+	+00	00+	00+	00+
Stylodrilus heringianus	+++	000	+0+	000	+00
Stylodrilus brachystylus	000	000	000	000	0+0
Lumbricidae	0+0	000	+00	000	000
Eiseniella tetraedra	000	000	000	000	00+
Piscicola geometra	000	000	00+	000	0++
Theromyzon tessulatum	000	0+0	000	+00	000
Hemiclepsis marginata	000	0+0	000	000	000
Glossiphonia complanata	+0+	+++	+++	+++	+0+
Helobdella stagnalis	+00	000	+00	00+	0+0
Erpobdella octoculata	+00	+++	000	+++	+++

Appendix N (contd)

	1	2	3	4	5
Trocheta subviridis	000	0+0	000	+00	000
Hydracarina	+0+	+00	+++	00+	0++
Asellus aquaticus	++0	+++	0+0	+++	+++
Crangonyx pseudogracilis	00+	+++	+00	+++	00+
Gammarus pulex	+++	+0+	+++	+++	+++
Baetis scambus group	00+	00+	000	000	0++
Baetis vernus	000	00+	000	000	00+
Baetis buceratus	000	000	+00	000	000
Baetis rhodani	+00	000	000	000	+00
Baetis atrebatinus	00+	000	000	000	000
Baetis muticus	00+	000	000	000	000
Baetis digitatus	000	00+	000	000	000
Centroptilum luteolum	00+	00+	000	0++	00+
Centroptilum pennulatum	000	000	000	0+0	0+0
Cloeon dipterum	000	000	000	00+	000
Heptagenia sulphurea	000	000	000	000	+00
Ecdyonurus sp.	+00	000	000	0+0	0+0
Leptophlebia sp.	000	000	000	+00	000
Leptophlebia marginata	000	000	000	00+	000
Habrophlebia fusca	000	+00	000	0+0	000
Ephemerella ignita	++0	0+0	0+0	000	+++
Ephemera vulgata	000	000	000	+00	000
Ephemera danica	+00	000	+++	000	0++
Caenis luctuosa group	+00	+00	+00	+++	+++
Caenis horaria	000	000	000	00+	000
Caenis rivulorum	+00	000	000	000	000
Amphinemura standfussi	000	+00	000	000	000
Leuctra geniculata	0+0	000	000	000	0+0
Platycnemis pennipes	000	+00	000	000	000
Coenagriidae	000	000	000	+00	000
Ischnura elegans	000	+00	000	00+	000
Calopteryx splendens	000	+++	+++	00+	00+
Gerris sp.	000	0+0	000	000	000
Gerris (Gerris) lacustris	000	000	000	0+0	000
Aphelocheirus aestivalis	000	000	000	000	+++
Notonecta sp.	000	0+0	000	000	0+0
Hesperocorixa sahlbergi	000	000	000	00+	000
Sigara (Sigara) sp.	000	+++	000	0+0	0++
Sigara fossarum	000	00+	000	0++	000
Brychius elevatus	000	+++	+00	+++	0++
Haliphus sp.	000	0+0	000	00+	00+
Haliphus fluviatilis	000	00+	000	000	0+0
Laccophilus sp.	000	000	000	0+0	000
Potamonectes depressus	00+	+00	+00	+00	00+
Stictotarsus duodecimpustulatus	000	00+	000	000	000
Platambus maculatus	00+	000	000	000	00+
Ilybius fuliginosus	000	0+0	000	0+0	000
Gyrinus aeratus	000	+00	000	0+0	000
Orectochilus villosus	+00	000	+++	000	+00
Hydrophilidae (incl. Hydraenidae)	000	000	000	000	0+0
Hydraena sp.	000	000	000	00+	000
Hydraena riparia	000	000	000	0+0	000
Hydraena rufipes	000	000	000	0+0	000
Helophorus brevipalpis	000	0+0	000	0++	000
Helophorus grandis	000	0+0	000	000	000
Elmis aenea	+++	+++	+++	+++	+++
Limnius volckmari	+++	+0+	+++	000	+++
Oulimnius sp.	00+	000	000	000	000
Oulimnius tuberculatus	+00	+++	+++	+++	+++
Riolus subviolaceus	+++	000	000	000	000
Sialis lutaria	000	+++	+00	+++	00+
Sisyra sp.	000	00+	000	000	000
Rhyacophila dorsalis	0+0	000	0+0	000	+0+
Glossosoma sp.	000	000	000	000	00+
Agapetus sp.	+0+	000	000	000	000
Polycentropus flavomaculatus	000	00+	0+0	0++	+++
Tinodes waeneri	000	000	000	000	0+0
Psychomyia pusilla	+00	000	000	000	000
Hydropsyche pellucidula	+00	000	+++	000	+++
Hydropsyche angustipennis	000	00+	000	+0+	000
Hydropsyche contubernalis	00+	000	0+0	000	000
Hydropsyche siltalai	+00	000	000	000	+00
Cheumatopsyche lepida	0+0	000	000	000	+++

Appendix N (contd)

	1	2	3	4	5
Hydroptila sp.	0+0	0+0	+00	000	000
Phryganea grandis group	000	0++	000	000	00+
Agrypnia obsoleta group	000	0+0	000	000	000
Limnephilidae	000	000	00+	000	00+
Limnephilus sp.	000	000	000	00+	000
Limnephilus marmoratus	000	000	000	+00	000
Limnephilus lunatus group	000	+00	+00	+00	000
Anabolia nervosa	000	000	000	+00	000
Halesus radiatus	000	+00	000	000	000
Chaetopteryx villosa	000	000	000	0+0	000
Molanna sp.	000	000	000	0+0	000
Molanna angustata	000	000	000	00+	000
Athripsodes sp.	000	000	0+0	000	00+
Athripsodes aterrimus	000	0+0	000	00+	000
Athripsodes cinereus	+00	000	+0+	0+0	000
Athripsodes albifrons	+00	000	000	000	+00
Mystacides nigra	000	000	000	+0+	000
Mystacides azurea	+0+	000	0++	+0+	+0+
Ceraclea dissimilis	000	000	000	000	0+0
Goera pilosa	000	000	000	+0+	+0+
Silo nigricornis	+00	000	000	000	000
Lepidostoma hirtum	+00	000	00+	000	+++
Brachycentrus subnubilus	+0+	000	0++	000	+++
Sericostoma personatum	+++	000	000	+++	+++
Non-gilled Pyralidae	000	000	000	000	0+0
Tipula montium group	+00	00+	000	000	000
Tipula paludosa	000	00+	000	000	000
Antocha vitripennis	+++	000	+00	000	000
Dicranota sp.	+++	000	0++	000	000
Psychodidae	000	000	000	000	0+0
Pericoma fallax	000	000	000	+00	000
Pericoma trivialis group	000	000	000	+00	000
Ceratopogonidae	0+0	+00	+00	000	0+0
Macropelopia sp.	000	000	000	+00	000
Procladius sp.	00+	+00	000	0+0	000
Ablabesmyia sp.	000	+00	000	0+0	000
Larsia curticalcar	000	000	000	000	0+0
Paramerina sp.	00+	000	000	000	000
Thienemannimyia group	00+	+00	0+0	+++	000
Zavrelimyia sp.	000	000	000	000	00+
Potthastia longimana group	000	00+	000	000	000
Brillia longifurca	00+	000	000	000	000
Cricotopus (Cricotopus) sp.	00+	0++	000	000	+0+
Cricotopus (Cricotopus) trifascia	+00	000	000	000	+00
Cricotopus (Isocladius) sp.	00+	000	0+0	0+0	0+0
Diplocladius cultriger	000	000	000	+00	000
Eukiefferiella clypeata	000	000	000	000	+00
Eukiefferiella ilkleyensis	00+	000	+00	000	+++
Eukiefferiella gracei	+00	000	+00	000	000
Nanocladius rectinervis	000	000	000	000	00+
Orthocladius (Euorthocladius) rivulorum	+00	000	000	000	000
Orthocladius (Euorthocladius) thienemanni	+00	000	000	000	+00
Rheocricotopus sp.	000	000	+00	000	000
Synorthocladius semivirens	000	000	0+0	000	000
Metriocnemus sp.	000	0+0	000	+00	000
Parametriocnemus stylatus	0+0	000	000	000	000
Thienemanniella sp.	000	00+	000	000	00+
Cricotopus group	+0+	+0+	+0+	+++	+++
Tvetenia calvescens	+00	+00	+++	000	+++
Prodiamesa olivacea	00+	000	0+0	+00	000
Chironomus sp.	000	000	000	+00	000
Cryptochironomus sp.	000	0+0	0+0	000	000
Demicryptochironomus vulneratus	0+0	000	000	000	000
Glyptotendipes sp.	000	000	000	+00	000
Dicrotendipes sp.	000	+00	000	+00	000
Microtendipes sp.	00+	000	000	0++	00+
Paratendipes sp.	000	0+0	000	000	000
Polypedilum sp.	0+0	0+0	+00	000	000
Phaenopsectra sp.	000	+00	000	000	000
Cladotanytarsus sp.	00+	000	000	000	000
Micropsectra sp.	000	+++	000	+++	00+
Paratanytarsus sp.	000	+++	0+0	+00	+0+
Tanytarsus sp.	00+	00+	000	0+0	000

Appendix N (contd)

	1	2	3	4	5
Tanytarsus brundini	00+	000	000	++0	+0+
Rheotanytarsus sp.	000	000	++0	000	000
Simulium (Nevermannia) verum group	000	000	000	+00	000
Simulium (Nevermannia) angustitarse group	000	0+0	000	++0	00+
Simulium (Eusimulium) aureum group	+00	0++	0+0	0+0	00+
Simulium (Wilhelmia) sp.	000	0++	+++	0+0	+++
Simulium (Simulium) posticatum	000	+00	+00	+00	+00
Simulium (Boophthora) erythrocephalum	000	0++	0++	000	+0+
Simulium (Simulium) ornatum group	++0	000	+00	000	+++
Empididae	0+0	000	000	000	000
Atalanta group	000	0+0	0+0	0+0	00+
Dolichopodidae	000	000	000	+00	000
Ephydriidae	000	000	000	000	0+0
Limnophora sp.	000	00+	000	0+0	+00

Appendix O. Environmental data for the 55 new NRA sites. See text for further explanation

River	Site	Altitude m	Slope m km ⁻¹	Discharge Category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand Silt/ Clay
Anglian region											
Goulceby Beck	Goulceby	56	3.3	1	5.0	1.7	15.0	147.7	3	47	42 8
Cringle Brook	Thunderbridge	80	4.4	1	9.4	4.1	41.7	235.0	7	40	25 28
Reach Lode	Hallards Fen Road	1	0.1	1	4.0	5.3	91.7	272.5	0	10	0 90
Monks Lode	Eternity Hall Bridge	1	2.5	1	7.8	5.7	116.7	230.0	7	20	0 73
16 Foot Drain	Horseways Corner	3	0.1	2	43.0	14.0	100.0	230.0	2	10	2 87
R. Rase	Bully Hills	85	20.0	1	1.4	3.2	15.0	190.0	8	20	25 47
Orford Beck	Kirmond Le Mire	73	7.1	1	3.0	1.2	15.0	207.5	2	61	30 7
R. Bain	Biscathorpe	74	4.2	2	8.8	2.2	16.7	229.0	5	55	23 17
Northumbria and Yorkshire region											
R. Till	Chatton	26	1.4	6	65.4	37.3	34.3	66.0	87	3	10 0
R. Till	Etal	43	1.0	5	38.9	8.7	51.7	78.7	0	0	67 33
R. Glen	Ewart	39	0.7	5	38.0	51.7	37.7	38.0	73	27	0 0
Ganton Burn	Rothill	65	10.0	1	2.0	1.2	9.0	164.3	23	60	0 17
Gate Burn	Framlington Gate	158	66.7	1	1.0	1.0	7.0	60.3	63	27	0 10
Kilton Beck	Lodge Wood	95	25.0	1	4.5	3.3	9.3	87.0	48	40	10 2
R. Balder	U/S Balderhead Reservoir	349	33.3	2	5.5	8.7	15.3	27.0	32	67	2 0
College Burn	Hethpool	115	20.0	2	11.0	9.7	15.0	20.9	57	43	0 0
Harthorpe Burn	Coronation Wood	145	16.7	1	9.0	6.1	27.7	24.0	83	17	0 0
North West region											
R. Lune	Old Tebay	175	3.3	6	14.5	13.0	33.3	89.0	82	18	0 0
R. Lune	Rigmaden	60	2.1	7	40.0	20.7	35.0	66.0	77	23	0 0
R. Lune	Forge Wear	13	1.3	8	70.8	73.3	44.3	67.0	60	40	0 0
R. Eden	Appleby	123	1.1	6	40.0	23.3	30.3	138.0	45	55	0 0
R. Eden	Temple Sowerby	93	1.0	7	55.2	41.7	48.0	138.0	20	80	0 0
R. Eden	Warwick Bridge	19	0.6	8	95.2	43.0	35.3	88.0	56	43	0 1
R. Waver	Waver Bridge	16	2.0	3	15.5	7.7	15.7	133.0	70	27	3 0

Appendix O (contd)

River	Site	Altitude m	Slope m km ⁻¹	Discharge Category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand Silt/ Clay
Severn Trent region											
R. Severn	Llandinam	136	1.8	7	31.0	21.7	25.0	15.0	32	68	0 0
R. Severn	Isle Of Bicton	49	0.3	8	119.5	25.0	76.7	61.2	23	73	0 3
Sher Brook	Shugborough	86	12.5	1	5.3	2.0	11.7	83.0	17	70	13 0
Bradgate Brook	Newton Linford	105	10.0	1	6.0	3.0	9.3	134.9	40	35	12 13
R. Derwent	Baslow	109	1.9	5	35.0	20.0	25.0	59.4	83	13	3 0
R. Derwent	Cromford Meadows	79	1.9	6	54.2	24.0	40.0	132.0	73	17	10 0
R. Wye (Trib of Derwent)	Ashford	135	4.3	4	26.0	20.0	21.7	196.6	60	20	20 0
Southern region											
Ditton Stream	Ditton	10	7.1	1	1.5	1.3	23.3	276.0	20	43	17 20
Sutton Stream	Road Bridge	16	6.3	1	2.0	1.8	30.0	183.0	2	15	0 83
South Western region											
Bodilly Stream	Bodilly Bridge	116	7.7	1	4.3	2.1	18.2	8.5	14	58	8 20
Newlyn River	Skimmel Bridge	91	10.0	1	6.5	2.8	30.6	8.3	34	45	17 4
Bala Brook	100m U/S Zeal Bridge	210	50.0	1	3.4	3.7	18.0	4.0	73	23	3 0
Poltesco River	Poltesco Bridge	33	50.0	1	5.3	3.2	14.1	153.0	55	30	5 10
Stithians Stream	Searaugh Moor	118	16.7	1	4.5	2.3	12.1	11.0	31	38	23 8
Trevaylor Stream	Trythogga	23	33.3	1	6.0	1.8	19.7	12.1	38	38	12 12
Gweek River	Mether-yny-mill Bridge	70	25.0	1	5.0	2.1	21.1	11.1	23	38	18 20
Manaccan River	Polkanoggo	37	8.3	1	3.5	2.6	10.0	106.3	28	37	10 25
St. Keverne Stream	Porthoustock Bridge	6	25.0	1	3.0	1.5	13.1	103.9	13	60	17 10
Thames region											
R. Kennet	U/S Aldershot Water	63	1.5	6	63.6	13.1	43.3	246.0	5	63	25 7
R. Lambourn	Bagnor	78	1.8	4	19.0	11.2	43.3	251.0	3	42	37 18
R. Lyde	Deanlands Farm	64	3.7	2	5.0	5.8	36.7	243.0	23	43	25 8
R. Coln	Fosse Bridge	118	2.2	2	17.0	7.9	22.3	158.0	12	47	25 17
R. Windrush	D/S Dickler	120	2.1	4	21.0	8.5	48.3	172.0	12	43	33 12
Clayhill Brook	U/S Burghfield STW	62	12.5	1	1.4	0.7	9.0	155.0	2	48	18 32

Appendix O (contd)

River	Site	Altitude m	Slope m km ⁻¹	Discharge Category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Silt/ Clay
Thames region											
R. Ash	Easneye	33	1.7	2	25.0	5.2	26.7	234.0	8	63	19 10
R. Chess	U/S R. Colne	50	1.1	2	15.0	8.5	25.7	253.0	6	43	38 12
Welsh region											
R. Cynfal	Pont Newydd	185	33.3	2	6.5	5.3	24.0	12.9 ₁	78	21	0 1
R. Seiont	Pont Y Gromlech	195	33.3	3	2.2	7.7	11.7	8.2 ₁	75	25	0 0
R. Caseg	Braichmelyn	160	66.7	2	6.4	12.0	28.0	9.8 ₁	83	17	0 0
R. Braint	Pont Mynach	4	2.0	3	9.5	3.0	12.3	94.5 ₁	15	68	17 0
Morlas Brook	D/S Glyn Morlas	50	25.0	1	2.0	2.7	15.0	154.1 ₁	82	12	5 2

1 Alkalinity values estimated from total hardness using the RIVPACS II software.

Appendix P. Environmental data for the 20 Headwaters Project lower catchment sites.

River	Site	Altitude m	Slope m km ⁻¹	Discharge Category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Silt/ Clay
Cam catchment											
Mill River	Wendy	23	1.7	1	9.0	2.3	16.7	217.0	5	20	0 75
River Granta	Hildersham	33	2.2	1	12.5	3.3	10.0	251.5	10	65	7 18
Reach Lode	Upware Lock	1	0.1	1	14.0	10.7	100.0	365.5	0	17	0 83
River Rhee	Harston	12	0.8	3	24.0	5.7	35.0	239.5	8	44	33 15
River Cam	Hauxton Mill	10	1.2	4	34.0	6.0	55.0	251.0	15	52	17 16
Derwent catchment											
Holbeck	Hovingham Carrs	33	2.5	2	13.5	3.3	19.3	179.2 ₂	22	72	3 3
Pickering Beck	Levisham	67	5.0	1	10.1	4.0	13.1	67.8 ₂	47	26	0 27
River Seph	Laskill	112	3.3	3	14.5	8.0	14.6	42.6 ₂	49	43	8 0
Menethorpe Beck	Menethorpe	16	6.7	1	9.0	1.7	16.0	216.0 ₂	19	57	18 6
River Rye	Nunnington	33	2.2	5	38.0	16.7	24.6	85.3 ₂	6	87	3 5
Lugg catchment											
Back Brook	Kington	150	3.3	1	15.3	3.8	21.3	161.0 ₁	55	43	0 2
Curl Brook	Pembridge	95	5.0	1	32.0	3.0	23.7	161.0 ₁	17	73	8 2
Main Ditch	Leominster	70	2.2	1	45.0	2.2	35.7	193.0 ₁	8	58	2 32
Hindwell Brook	Combe	134	3.3	4	22.0	6.2	22.7	113.0 ₁	37	63	0 0
River Lugg	Mordiford	50	0.9	7	133.0	20.0	38.3	132.7 ₁	67	33	0 0
Stour catchment											
River Allen	Walford Mill	20	1.7	4	19.0	10.8	25.2	194.0	4	85	9 2
River Cale	Syles Farm	54	0.8	3	18.3	5.8	68.3	243.0	20	47	8 25
River Stour	Trill Bridge	57	1.1	4	18.0	4.0	34.4	236.5	5	75	15 5
River Lydden	Bagber Bridge	52	1.7	4	19.5	6.0	35.0	258.3	7	78	10 5
River Stour	Spetsbury	27	0.7	6	60.0	25.0	30.0	234.3	22	63	10 5

† Alkalinity values estimated from total hardness using the RIVPACS II software.

‡ Alkalinity values estimated from conductivity using the RIVPACS II software.

Appendix Q. Environmental data for the 31 Headwaters Project upper catchment sites.

River	Site	Altitude m	Slope m km ⁻¹	Discharge Category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand Silt/ Clay
Cam catchment											
Nine Wells Spring	Nine Wells	18	3.4	1	0.2	2.1	14.8	236.0	0	0	0 100
River Cam	Prior's Wood	96	10.0	1	1.8	1.9	7.9	266.0	5	62	5 28
Un-named Watercourse	Down Hall Farm	28	30.0	1	0.8	1.3	6.6	207.0	0	0	1 99
Derwent catchment											
Billar Howe Nook Slack	Turf Rigg	175	66.7	1	0.4	0.8	10.0	3.5	60	13	3 24
Mill Beck	Bathingwell Wood	116	66.7	1	0.2	0.5	8.0	130.0	0	12	0 88
Rowmire Spring Stream	Rowmire Plantation	70	22.2	1	2.0	2.1	2.7	256.0	42	35	8 15
Bishop Wilton Beck	Bishop Wilton	82	40.0	1	0.5	0.5	2.8	129.0	1	52	5 42
Long Gill	Newgate Foot	190	20.0	1	1.0	0.6	4.9	88.0	5	32	2 61
Halleykeld Spring Stream	Halleykeld Rigg	132	40.0	1	0.1	0.5	4.1	170.0	23	60	7 10
Gill Dike	Frost Hall	210	133.3	1	1.0	0.9	12.8	15.3	61	26	3 10
Cowhouse Beck	Snaper House	184	40.0	1	1.0	2.2	8.0	179.0	73	18	4 5
Mirefalls Gill	Reins Wood	112	28.6	1	0.3	0.6	7.7	162.0	30	42	7 21
Sledhill Gill	Yowlass Wood	170	50.0	1	1.0	1.1	16.2	145.0	7	57	21 15
Wheat Beck	Dale Head	227	57.1	1	1.3	1.2	7.1	76.8	55	32	5 8
Lugg catchment											
Un-named Watercourse	Great Wacton	150	33.3	1	1.0	0.6	2.4	228.0	1	45	0 54
Un-named Watercourse	Bredenbury	176	40.0	1	0.7	0.7	5.0	265.0	1	78	1 20
Un-named Watercourse	Dunhampton Farm	165	66.7	1	0.4	0.5	2.3	267.0	4	43	1 52
Un-named Watercourse	Dinmore Manor	98	50.0	1	0.9	0.5	2.8	215.0	38	27	1 34
Gladestry Brook	Cefnhir	320	80.0	1	1.0	1.1	3.5	48.4	45	45	3 7
Un-named Watercourse	Glasnant	330	100.0	1	1.0	1.2	5.1	46.0	83	13	1 3
Un-named Watercourse	Crinfynydd	390	50.0	1	1.1	0.8	9.8	42.0	77	17	1 5
Un-named Watercourse	Hill House Dingle	225	40.0	1	1.5	1.3	8.2	60.5	70	15	1 14
Un-named Watercourse	Pen-twyn	300	40.0	1	0.4	0.4	3.6	102.0	20	64	2 14

Appendix Q (contd)

River	Site	Altitude m	Slope m km ⁻¹	Discharge Category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand Silt/ Clay
Stour catchment											
Un-named Watercourse	Gaspar	128	28.6	1	1.2	0.8	9.9	50.3	8	70	10 12
Un-named Watercourse	Woodlands Manor	89	6.7	1	1.7	1.2	12.3	254.0	0	20	0 80
Un-named Watercourse	Cowherd Shute Farm	122	66.7	1	0.2	0.6	3.8	125.0	7	34	22 37
Un-named Watercourse	Lyon's Gate	154	66.7	1	0.1	0.6	1.7	162.0	11	48	22 19
Un-named Watercourse	Alton Common	121	33.9	1	0.4	0.7	6.2	215.0	75	17	1 7
Un-named Watercourse	Farrington	60	7.4	1	4.5	1.7	22.3	237.0	1	16	1 82
Un-named Watercourse	Woolland	122	46.9	1	0.3	1.1	4.2	174.0	18	70	3 9
Un-named Watercourse	Okeford Fitzpaine	89	30.5	1	1.3	0.9	9.9	220.0	50	34	5 11

Appendix R. Environmental data for the 103 'NCC' sites.

River	Site	Altitude m	Slope m km ⁻¹	Discharge category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand	Silt/ Clay
R.Arrow	Kesty	325	22.0	2	2.5	1.1	8.7	66.9 ₁	9	82	4	5
R.Arrow	Kington Urban	162	6.1	4	19.0	10.7	17.7	66.9 ₁	67	28	3	3
R.Arrow	Folly Farm	88	3.0	5	37.0	17.0	17.8	117.2 ₁	24	72	4	1
R.Arrow	Ivington	69	0.7	5	45.0	7.8	55.8	125.5 ₁	3	78	15	4
R.Teme	Felindre	282	15.0	1	6.0	3.2	15.2	89.9	42	56	1	1
R.Teme	Pennant Pound	224	3.4	3	15.0	12.3	17.9	89.9	68	29	1	1
R.Teme	Brampton Bryan	129	4.0	5	35.0	10.7	32.6	89.9	22	72	3	3
R.Teme	Tenbury	50	1.7	7	74.0	31.7	40.4	125.8	27	55	9	9
R.Teme	Powick Bridge	15	0.8	7	121.1	21.0	68.2	141.9	5	69	18	7
R.Bure	Corpusty	30	3.8	1	8.0	5.7	58.2	240.0	0	15	27	58
R.Bure	Whitehouse Farm Ford	15	1.7	2	16.0	9.8	49.0	220.0	1	34	12	53
R.Bure	Buxton Mill	5	0.6	4	31.0	17.3	133.4	200.0	0	2	2	95
R.Bure	Coltishall Bridge	3	0.4	4	36.0	12.7	110.4	183.0	6	26	25	44
R.Test	Lower Brook	23	1.4	6	38.0	20.0	103.0	230.0	11	24	42	23
R.Test	Romsey	13	1.0	7	47.0	34.0	89.1	230.0	2	50	22	26
R.Test	Skidmore	11	0.7	7	50.0	22.3	107.2	221.0	4	64	20	12
R.Piddle	Piddletrenthide	107	6.3	1	2.0	3.1	14.1	234.3	9	52	4	35
R.Piddle	Druce	60	4.4	3	10.0	4.1	25.5	234.3	8	48	12	33
R.Piddle	Brockhill Bridge	29	2.8	4	21.0	12.5	39.9	221.0	8	59	17	16
R.Piddle	Wareham	2	2.0	4	32.0	12.2	48.0	179.0	10	60	22	8
Bere Stream	Middle Bere	22	4.0	2	14.0	7.5	35.6	225.0	1	49	27	22
R.Barle	Goat Hill	385	16.7	1	2.0	2.7	18.7	14.1	78	19	2	0
R.Barle	Cow Castle	275	8.3	3	12.5	14.3	22.8	14.1	79	19	1	1
R.Barle	South Hill	243	3.3	5	19.5	14.2	41.6	12.2	71	24	3	2

Appendix R (contd)

River	Site	Altitude m	Slope m km ⁻¹	Discharge category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand	Silt/ Clay
R.Barle	Pixton Hill	121	5.0	5	36.5	16.3	50.5	12.2	77	18	4	2
By Brook	Gatcombe Hill	91	7.7	1	8.0	5.8	32.2	221.3	18	53	24	4
By Brook	Slaughterford	53	4.0	3	16.0	7.1	37.7	221.3	6	72	20	2
By Brook	Ashley	30	2.9	4	24.0	9.4	42.8	201.7	17	52	28	3
R.Monnow	Llanveynoe	175	10.0	1	9.0	12.0	19.7	126.7 ₁	82	12	1	5
R.Monnow	Clodock	125	6.7	4	14.0	10.3	29.9	126.7 ₁	51	38	9	3
R.Monnow	Great Goytre	85	5.0	5	23.0	12.0	40.6	140.3 ₁	76	20	1	3
R.Monnow	Rockfield	26	1.5	6	50.0	23.1	54.2	135.3 ₁	28	54	6	12
R.Brue	South Brewham	84	6.7	1	5.0	3.2	21.6	186.7	25	64	8	3
R.Brue	Wyke	45	2.5	3	12.5	5.2	28.3	227.7	63	22	4	12
R.Brue	Tootle Bridge	16	1.7	4	26.0	11.7	48.5	284.0	53	12	23	12
R.Brue	Liberty Farm	2	0.4	4	49.0	10.7	115.1	270.3	15	6	1	78
Dowles Brook	D/s Lem Brook	70	6.7	1	7.0	7.0	7.8	32.0	61	35	2	2
Dowles Brook	U/s Dowles Manor	27	6.7	2	13.0	6.1	9.3	32.0	57	37	4	2
R.Clun	Whicott Keysett	191	3.4	3	10.5	6.3	24.7	64.2	49	42	5	4
R.Clun	Purslow	150	3.3	4	20.0	8.0	25.8	64.2	53	40	1	5
R.Clun	Jay	122	2.2	5	31.0	11.2	24.4	86.0	22	72	3	4
R.Teign	Leigh Bridge	175	10.0	4	11.0	12.8	45.1	6.9	68	21	10	1
R.Teign	Fingle Bridge	110	7.1	5	19.5	11.2	48.0	6.9	81	11	8	1
R.Teign	Whetcombe Barton	27	2.9	6	37.0	15.8	30.5	18.5	66	30	4	1
R.Fowey	Codda Ford	242	7.1	1	3.0	3.0	25.6	5.8	75	20	5	0
R.Fowey	Draynes Bridge	186	5.0	4	15.0	8.4	33.6	5.8	41	46	11	2
R.Fowey	Leball Bridge	30	4.5	5	28.0	18.0	33.2	10.5	66	28	5	2
Coombe Valley Stream	Kilkhampton	100	40.0	1	5.0	1.4	7.8	50.0	65	30	3	3
Coombe Valley Stream	Coombe	30	12.5	1	1.7	3.2	9.3	50.0	63	28	2	7
Cowside Beck	Nab End	303	20.0	3	4.0	7.1	25.5	103.3 ₂	89	8	1	2
Cowside Beck	Arncliffe	220	20.0	3	7.5	7.5	28.2	103.3 ₂	91	9	0	0

Appendix R (contd)

River	Site	Altitude m	Slope m km ⁻¹	Discharge category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand	Silt/ Clay
Gordale Beck	Seaty Hill	350	25.0	1	2.8	5.7	20.9	72.0 ₂	40	42	8	11
Gordale Beck	Gordale Bridge	230	50.0	1	4.8	5.2	14.9	72.0 ₂	84	12	3	1
R.Brora	Dalnessie	180	14.3	5	11.0	14.0	25.9	12.5	97	3	0	0
R.Brora	U/s Balnacail	54	9.1	6	31.0	20.7	27.4	11.5	97	2	0	0
R.Brora	D/s Loch Brora	21	0.9	7	44.0	24.3	49.1	7.0	99	1	0	0
R.Blackwater	Creag Dhubh	246	13.3	5	11.0	13.3	27.8	12.0	97	2	0	0
R.Blackwater	Pollie	120	12.5	6	19.0	18.7	32.6	12.0	96	3	0	0
R.Laxford	D/s Loch Stack	30	1.3	6	18.0	28.0	32.4	5.7	86	13	1	0
R.Hull	Little Driffield	18	2.0	3	1.6	4.2	10.9	133.3 ₂	28	64	5	3
R.Hull	Wansford	9	0.3	4	9.0	12.2	34.7	133.3 ₂	3	73	3	20
R.Hull	Corpslanding	8	0.3	4	13.0	11.3	122.2	133.3 ₂	0	0	0	100
Kelk Beck	Harpham	14	2.5	2	5.2	5.5	22.8	136.0 ₂	20	56	6	18
Kelk Beck	Foston	9	0.3	2	12.0	10.0	92.7	136.0 ₂	0	0	0	100
Knock Ore Gill	Green Castle	590	100.0	1	1.0	1.8	14.8	75.0	80	18	1	1
Whiteadder	Cranshaws	190	10.0	3	11.0	9.0	16.0	84.0	80	18	2	0
Whiteadder	Preston Haugh	94	5.0	5	30.0	17.7	18.0	84.0	65	31	4	0
Whiteadder	U/s Allanton	35	3.3	5	44.0	19.3	26.0	87.0	78	18	3	0
Whiteadder	Chesterfield Ford	9	1.0	6	55.0	18.0	25.0	121.0	73	23	4	0
Blackadder	Halliburton Bridge	175	3.3	2	10.7	4.2	26.3	153.0	32	52	10	7
Blackadder	Fogo	95	5.9	3	22.9	8.3	19.0	170.0	73	23	4	0
Blackadder	Blackadder Water Foot	35	3.3	4	35.5	10.0	17.0	183.3	60	35	5	0
R.Wissey	North Pickenham	35	1.7	2	11.0	3.5	8.0	201.5	47	40	7	7
R.Wissey	Linghills Farm	23	1.4	2	18.5	4.7	16.7	263.5	63	18	10	8
R.Wissey	Didlington Lodge	8	0.4	4	34.5	6.7	26.7	170.0	55	25	12	8
R.Wissey	Five Mile House	3	0.4	5	48.5	11.7	116.7	282.5	0	0	0	100
R.Walkham	Merrivale	278	2.5	2	8.0	6.8	50.0	6.7	63	25	9	3
R.Walkham	Grenofen	63	8.0	4	18.0	11.9	20.1	7.9	66	22	8	4

Appendix R (contd)

River	Site	Altitude m	Slope m km ⁻¹	Discharge category	Distance km	Width m	Depth cm	Alkalinity mg l ⁻¹ CaCO ₃	Boulders/ Cobbles	Pebbles/ Gravel	Sand	Silt/ Clay
R.Lathkill	Alport	142	5.0	4	6.0	6.0	10.7	194.6	30	47	20	3
R.Lathkill	Congreave	107	5.0	4	9.0	6.0	21.7	175.0	23	57	15	5
R.Coquet	Carshope	275	10.0	3	9.0	6.5	18.0	71.0	80	20	0	0
R.Coquet	Linshields	175	10.0	5	18.0	13.7	23.7	71.0	75	25	0	0
R.Coquet	Sharperton	125	4.0	5	26.0	18.3	15.3	61.0	67	33	0	0
R.Coquet	Pauperhaugh	55	2.5	6	49.0	39.0	29.0	83.7	50	48	0	2
R.Coquet	Coquet Lodge	1	1.7	6	78.0	28.7	55.0	90.3	8	28	33	30
De Lank	Bradford	205	8.0	4	9.0	5.8	29.9	5.7	30	58	5	7
De Lank	Keybridge	65	13.3	4	13.0	7.9	34.0	6.5	56	29	7	9
R.Wharfe	Hubberholme	230	5.8	4	12.0	7.0	20.0	77.7	73	20	5	2
R.Wharfe	Grassington	165	6.6	6	29.5	28.0	27.0	94.4	53	37	8	2
R.Wharfe	Addingham	83	2.5	7	51.2	30.0	40.3	62.7	33	53	3	10
R.Wharfe	Odley	55	1.8	7	66.2	30.0	39.3	162.2	53	30	5	12
R.Wharfe	Wetherby	15	1.3	7	96.2	36.7	25.7	118.1	27	53	18	2
Western Cleddau	Wolf's Castle	35	5.0	4	17.0	9.4	20.0	44.8	35	53	9	3
Western Cleddau	Treffgarne	19	2.2	5	20.0	8.2	23.3	39.6	48	43	5	3
Western Cleddau	Crow Hill	8	0.7	6	26.5	12.1	24.0	39.7	0	95	5	0
R.Loddon	Oliver's Battery	66	2.9	3	3.0	11.8	65.0	224.0	5	40	13	42
R.Loddon	Sherfield On Loddon	54	1.5	4	10.0	13.0	53.3	224.0	2	55	22	22
R.Enborne	Brimpton	61	1.4	3	22.5	9.4	53.3	160.0	4	36	23	37
R.Bladnoch	Glassoch Bridge	70	2.9	4	17.0	10.7	40.7	2.3	55	45	0	0
R.Bladnoch	Spital	20	1.0	6	32.0	18.3	39.0	11.0	35	65	0	0
R.Lonan	Clachadubh	70	10.0	2	7.0	5.7	19.7	22.0	57	43	0	0
Lusragan Burn	Cluny Villa	13	10.0	3	6.5	6.3	15.0	35.0	67	33	0	0
Aber	Abergwyngregyn	35	40.0	1	6.0	5.0	23.0	14.5	85	15	0	0

1. Alkalinity values estimated from total hardness using the RIVPACS II software.

2. Alkalinity values estimated from conductivity using the RIVPACS II software.

Appendix S χ^2 tests for goodness of fit between the observed and the expected fauna of the 101 test sites at both BMWP family and species level based on the TWINSPAN 410 site classification and MDA prediction system (i.e. Method 2). Refer to Table 4.3 for interpretation of the 4 digit site codes. For each site, the upper line refers to BMWP families and the lower line to species data. Significant differences are indicated with 1, 2 or 3 asterisks. ($P < 0.05, 0.01, 0.001$).

CLASSIFICATION METHOD : TWINSPAN ON 410 SITES

TOTALS			CHI SQ	DF	SIG	90-100		80-89.9		70-79.9		60-69.9		50-59.9		40-49.9		30-39.9		20-29.9		10-19.9		0- 9.9	
OBS	EXP	O/E				OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E
5691																									
23	29.6	0.78	4.1	2		14	1.04	2	1.19	3	0.57	1	0.52	1	0.65	1	0.55	*0	1.5	*0	0.5	1	0.81	*0	0.7
71	72.9	0.97	2.1	8		8	1.06	11	0.98	7	1.16	7	0.82	4	0.61	10	1.06	4	0.89	5	0.80	7	1.09	8	1.24
5693																									
31	30.0	1.03	1.1	3		14	1.02	1	0.39	3	0.99	4	1.56	2	0.71	2	1.56	3	1.36	*0	0.5	1	1.27	1	1.71
71	71.7	0.99	5.3	7		18	0.99	8	0.87	5	0.74	3	0.78	6	0.90	7	1.13	8	1.53	5	1.16	3	0.49	8	1.53
5695																									
35	32.7	1.07	1.7	3		13	0.96	5	1.17	4	1.35	4	0.75	2	1.21	2	2.18	1	0.59	2	2.29	2	1.71	*0	0.2
81	79.4	1.02	5.1	9		17	0.99	9	0.97	8	1.34	6	0.85	8	1.32	8	1.18	6	0.79	3	0.50	7	0.94	9	1.50
5697																									
34	33.2	1.03	4.1	3		14	1.04	2	0.59	2	0.65	3	0.76	1	0.58	5	1.43	3	1.24	2	2.41	*0	0.2	2	3.37
84	82.2	1.02	3.4	8		10	0.96	9	1.05	7	1.17	10	0.89	2	0.45	6	0.81	11	1.12	13	1.46	9	1.08	7	0.99
8205																									
33	29.0	1.14	1.1	2		15	1.00	3	1.19	5	1.38	3	1.16	*0	0.5	4	1.92	*0	0.0	*0	0.8	2	1.41	1	1.95
59	67.7	0.87	3.4	6		14	0.85	4	0.47	6	0.89	6	0.93	7	1.06	5	1.13	2	0.42	5	1.20	4	0.83	6	1.30
8209																									
27	31.2	0.86	1.2	3		15	1.02	3	0.72	1	0.66	2	0.77	2	0.71	1	0.74	1	0.56	1	1.06	1	1.28	*0	0.5
61	75.3	0.81	6.4	8		17	0.89	6	0.71	8	1.06	6	1.18	7	0.95	6	0.95	2	0.42	2	0.42	4	0.62	3	0.55
8213																									
36	32.0	1.12	1.3	3		13	1.03	6	1.18	3	0.80	3	1.14	2	1.26	4	1.27	1	2.58	1	0.79	2	1.81	1	2.41
75	77.5	0.97	3.9	9		12	0.89	12	1.16	8	0.89	6	1.02	5	0.91	6	0.83	8	1.20	3	0.46	6	0.91	9	1.38
8217																									
38	33.7	1.13	2.4	3		14	0.96	5	0.97	3	1.02	4	1.25	4	1.39	1	0.70	2	2.09	4	2.09	1	3.31	*0	0.4
93	81.7	1.14	12.0	9		14	0.91	8	1.16	10	0.88	7	0.98	7	0.97	6	1.01	7	1.04	9	1.24	11	1.46	14	2.23
8221																									
34	33.9	1.00	0.2	3		13	1.03	5	0.84	4	1.09	3	1.15	2	0.93	4	1.08	2	2.56	*0	1.4	*0	0.7	1	3.39
65	85.7	0.76	10.4	9		5	0.53	12	1.09	10	0.95	5	0.76	6	0.74	5	0.62	7	0.77	8	0.81	1	0.14	6	1.03
8305																									
23	29.0	0.79	5.4	2		8	0.68	3	0.45	2	0.54	4	1.27	1	1.91	*0	0.4	*0	0.3	1	0.84	2	2.33	2	5.19
52	72.1	0.72	11.0	9		12	0.79	6	1.02	1	0.12	6	0.78	3	0.53	3	0.60	6	0.89	4	0.63	4	0.73	7	1.19
8309																									
36	29.0	1.24	5.5	2		12	1.02	7	1.06	4	1.08	4	1.27	1	1.91	*0	0.4	1	3.02	1	0.84	3	3.47	3	7.54
65	72.2	0.90	6.5	8		13	0.85	6	1.02	4	0.49	7	0.91	5	0.89	7	1.40	6	0.89	3	0.47	5	0.88	9	1.56
8313																									
33	30.3	1.09	1.7	2		15	0.90	3	1.19	1	1.35	3	1.18	2	1.22	2	0.90	2	2.03	2	1.93	3	2.33	*0	0.7
66	86.7	0.76	12.2	8		12	0.97	12	1.01	11	0.98	4	0.61	6	0.75	*0	3.1	7	0.67	5	0.63	9	1.05	*0	6.6
8317																									
34	32.4	1.05	0.1	2		16	1.02	3	1.15	5	1.30	4	1.04	*0	0.6	2	1.37	2	1.49	2	1.41	*0	0.9	*0	0.7
72	89.5	0.80	5.8	8		15	0.92	9	0.89	10	1.11	10	0.80	5	0.70	1	0.32	6	0.82	7	0.65	6	0.82	3	0.52
8421																									
45	33.0	1.37	13.5	3	**	14	1.03	5	1.16	2	1.30	5	1.28	6	1.30	1	0.72	2	1.14	1	2.40	5	4.75	4	8.99
97	89.5	1.08	41.2	9	***	13	1.05	8	0.79	4	0.58	8	1.02	6	0.68	5	0.55	8	0.73	11	1.35	13	1.43	21	3.29
8425																									
38	34.8	1.09	0.7	3		15	1.03	3	1.17	5	0.98	5	1.27	1	0.59	2	0.85	2	0.84	3	2.23	2	3.35	*0	0.2
84	93.0	0.90	5.4	9		12	0.97	8	0.94	6	0.73	7	0.90	7	0.97	9	0.82	14	1.19	7	0.64	6	0.62	8	1.45
8429																									
41	34.7	1.18	2.7	3		14	1.03	3	1.20	8	1.08	4	1.05	1	0.90	2	2.29	4	1.37	2	1.27	2	4.43	1	2.18
90	90.7	0.99	2.1	9		11	0.97	7	0.84	8	1.08	11	1.21	9	1.00	8	1.01	10	0.90	13	0.97	5	0.70	8	1.32
8505																									
27	29.5	0.92	1.0	2		11	1.03	5	1.20	2	0.54	3	1.58	1	0.46	2	0.63	1	0.93	1	0.72	1	3.26	*0	0.8
67	76.9	0.87	3.3	9		7	1.04	8	1.05	8	0.99	8	1.04	8	0.91	6	0.90	5	0.63	5	0.65	8	0.86	4	0.62

Appendix S (contd)

TOTALS			CHI	SQ	DF	SIG	90-100		80-89.9		70-79.9		60-69.9		50-59.9		40-49.9		30-39.9		20-29.9		10-19.9		0- 9.9		
OBS	EXP	O/E					OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB
8509																											
32	34.0	0.94		0.3	2		14	0.96	6	0.89	*0	0.7	3	0.93	3	0.78	2	0.75	1	2.99	2	2.16	*0	0.4	1	1.73	
71	85.3	0.83		5.5	9		15	0.99	6	0.71	5	0.67	8	0.78	6	0.90	5	0.66	9	1.06	3	0.42	8	1.06	6	0.92	
8513																											
45	36.7	1.23		4.6	2		20	1.02	6	1.20	2	0.90	5	1.57	6	1.52	2	2.13	1	3.30	1	1.16	1	4.61	1	2.05	
108	91.2	1.18		12.2	8		19	0.99	12	1.09	18	1.28	7	0.99	10	1.29	8	1.17	4	0.57	9	1.30	8	1.61	13	2.02	
8517																											
41	36.4	1.13		1.3	2		19	1.03	4	0.94	3	1.31	5	1.30	7	1.40	1	2.17	1	1.59	*0	0.5	*0	0.3	1	1.52	
96	90.2	1.06		4.5	9		17	1.05	11	1.08	16	1.27	8	0.89	10	1.22	10	1.39	7	0.85	7	1.35	4	0.62	6	0.86	
8521																											
35	33.8	1.04		1.7	3		12	0.95	7	0.92	2	0.89	4	1.24	1	0.47	3	1.27	2	1.86	3	2.42	1	1.57	*0	0.6	
83	83.6	0.99		2.1	9		10	0.88	8	0.93	8	1.17	12	0.97	8	1.23	5	0.77	7	0.84	7	0.90	11	1.28	7	1.06	
0381																											
31	32.4	0.96		1.0	2		15	0.89	3	0.69	*0	1.5	4	1.55	1	0.92	3	0.91	*0	0.7	1	1.55	3	2.18	*1	0.1	
62	77.8	0.80		10.1	7		17	0.77	7	0.58	6	0.71	4	0.61	3	0.67	1	0.31	4	0.77	5	0.85	5	0.87	10	2.52	
0385																											
34	32.6	1.04		0.2	2		19	1.01	2	0.77	2	0.87	3	1.58	4	1.53	1	0.56	1	1.43	*0	0.6	2	2.22	*0	0.4	
81	78.0	1.04		1.8	6		27	1.02	13	1.02	3	0.55	6	0.90	7	1.40	3	0.83	6	1.43	6	1.11	7	1.11	3	1.42	
0389																											
32	32.6	0.98		0.6	2		19	1.01	2	0.77	1	0.44	2	1.05	5	1.61	*0	1.3	1	1.43	1	1.65	1	1.00	*0	0.3	
85	78.1	1.09		2.3	6		26	1.02	13	1.08	6	0.77	5	0.93	7	1.52	4	0.96	7	1.42	7	1.15	6	1.09	4	2.00	
0393																											
37	32.5	1.14		2.3	2		18	1.01	4	1.15	1	0.63	3	1.16	5	1.61	1	0.77	2	2.86	*0	0.4	3	2.50	*0	0.3	
93	77.9	1.19		9.4	6		25	1.02	14	1.08	6	0.77	6	1.12	6	1.31	6	1.44	7	1.43	8	1.51	5	0.88	10	3.84	
0771																											
27	32.6	0.83		1.3	2		13	1.03	2	0.47	2	0.52	2	0.80	5	1.02	1	1.12	2	0.95	*0	0.2	*0	0.9	*0	0.4	
62	79.9	0.78		9.2	9		12	1.04	6	1.00	6	0.66	9	0.94	2	0.31	3	0.49	4	0.53	7	0.72	8	1.21	5	0.69	
0773																											
36	32.2	1.12		1.2	3		14	1.04	4	0.95	3	1.01	3	1.55	5	1.35	4	1.48	2	1.16	*0	0.2	1	1.33	*0	0.6	
67	79.2	0.85		7.7	9		11	0.96	6	0.78	6	0.89	8	0.90	6	0.85	4	0.63	5	0.69	7	0.71	11	1.57	3	0.43	
0775																											
30	33.1	0.91		1.0	2		13	1.03	5	0.75	1	0.69	2	0.63	6	1.35	*0	1.7	2	1.47	*0	0.4	1	1.28	*0	0.5	
61	80.5	0.76		7.8	9		10	0.86	7	1.17	7	0.76	5	0.55	5	0.74	3	0.45	8	1.00	8	0.82	4	0.62	4	0.56	
5671																											
34	30.0	1.13		0.9	2		15	1.02	1	1.23	5	1.11	4	1.56	1	0.89	3	1.59	3	1.73	*0	0.8	2	1.39	*0	0.5	
93	70.8	1.31		15.5	8	*		14	1.04	8	1.19	8	0.98	11	1.38	5	1.04	7	1.10	8	1.39	14	2.09	7	1.34	11	1.93
5673																											
35	32.1	1.09		1.0	3		13	1.02	6	1.16	5	1.09	3	1.55	2	1.92	3	0.82	*0	0.7	*0	1.2	2	2.73	1	2.34	
85	77.9	1.09		8.0	9		16	0.98	13	1.18	7	0.95	5	0.84	7	1.28	8	1.13	6	1.07	4	0.53	8	1.49	11	1.81	
5675																											
40	32.1	1.25		4.0	3		13	1.02	6	1.17	5	1.33	3	1.12	4	1.48	3	1.74	1	0.95	*0	0.9	3	3.28	2	4.34	
112	77.7	1.44		33.1	8	***		17	1.04	11	1.16	13	1.35	8	1.37	7	1.67	10	1.67	9	1.19	7	1.09	13	2.22	17	2.65
5677																											
30	34.5	0.87		0.7	2		13	0.85	1	0.57	4	0.75	4	1.03	1	0.92	2	0.63	5	1.77	*0	0.3	*0	0.1	*0	0.6	
88	84.9	1.04		11.5	9		11	0.83	9	1.06	8	0.98	6	0.67	9	1.36	7	0.96	14	1.38	6	0.82	5	0.61	13	1.98	
6405																											
27	33.2	0.81		3.4	2		13	1.03	4	0.94	2	0.53	5	1.11	3	0.69	*0	0.8	*0	0.3	*0	1.2	*0	0.9	*0	0.4	
81	80.5	1.01		9.7	9		13	1.04	7	1.04	10	0.95	6	0.93	6	0.93	8	0.93	5	0.79	5	0.52	8	1.14	13	2.04	
6409																											
32	32.4	0.99		0.5	3		13	1.03	4	0.79	3	0.82	1	0.75	3	1.11	4	1.11	3	1.66	1	4.98	*0	0.8	*0	0.6	
80	80.2	1.00		3.4	9		12	1.05	9	1.06	5	0.82	4	0.69	13	1.31	6	0.89	6	0.76	8	0.88	7	0.97	10	1.36	
6413																											
38	36.2	1.05		3.6	2		18	0.97	2	0.58	5	1.31	1	0.31	4	1.03	1	0.69	*0	0.0	1	0.91	2	8.55	4	8.42	
82	90.1	0.91		17.7	9	*		19	1.05	6	0.59	10	0.89	6	0.57	5	0.65	2	0.30	4	0.60	9	1.25	8	1.46	13	2.05
6417																											
30	28.7	1.05		1.6	2		16	1.01	3	0.86	2	0.91	1	0.75	*0	0.5	1	2.03	1	0.80	3	1.51	*0	0.8	3	3.63	
71	85.1	0.83		6.1	8		15	1.04	11	0.99	6	0.68	7	0.79	5	0.66	7	0.81	4	0.82	6	0.82	3	0.39	7	1.23	
6691																											
26	29.5	0.88		1.7	2		15	1.03	1	1.23	2	0.45	3	1.20	2	1.92	1	0.56	2	1.18	*0	1.0	*0	1.0	*0	0.7	
51	69.5	0.73		10.9	6		14	1.06	3	0.40	3	0.34	3	0.51	5	1.05	5	0.70	5	1.07	9	1.52	2	0.42	2	0.30	

Appendix S (contd)

TOTALS			CHI	SQ	DF	SIG	90-100		80-89.9		70-79.9		60-69.9		50-59.9		40-49.9		30-39.9		20-29.9		10-19.9		0- 9.9		
OBS	EXP	O/E					OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB
6693																											
26	30.5	0.85		1.9	3			12	0.96	4	1.18	2	0.67	2	1.02	3	0.94	1	0.58	*0	2.3	*0	0.6	1	0.90	1	1.62
54	71.4	0.76		8.0	8			7	0.94	7	0.83	3	0.57	4	0.47	4	0.56	7	1.30	9	0.94	4	0.82	5	0.71	4	0.52
8281																											
32	30.3	1.06		0.4	2			15	1.02	2	1.22	3	0.98	2	0.76	3	1.10	2	1.14	1	1.01	2	1.62	1	1.22	1	1.30
88	72.0	1.22		11.8	7			13	1.04	9	1.05	12	1.16	5	1.09	3	0.50	11	1.53	7	1.44	8	1.57	12	1.88	8	1.27
8285																											
36	30.7	1.17		4.5	3			14	1.03	3	0.88	3	1.32	3	0.93	2	0.89	5	2.28	2	1.36	1	1.11	1	1.35	2	3.41
89	73.6	1.21		16.1	7 *			16	0.99	9	1.06	10	1.20	5	1.13	7	0.91	6	0.98	7	1.29	7	1.62	7	1.05	15	2.52
8289																											
26	32.8	0.79		3.3	3			13	1.03	4	0.78	3	0.81	1	0.25	1	0.59	3	1.60	*0	1.4	*0	1.4	1	1.20	*0	0.3
80	79.8	1.00		4.0	9			12	0.96	9	0.87	9	1.09	6	0.93	9	1.17	10	1.35	7	0.99	3	0.47	6	0.88	9	1.31
8605																											
33	32.4	1.02		0.1	2			18	1.01	3	0.87	*0	1.6	5	1.57	2	1.00	3	1.67	*0	0.4	*0	0.9	2	1.67	*0	0.1
77	77.7	0.99		3.0	6			20	0.88	14	1.01	8	1.03	5	0.76	5	1.45	4	0.94	4	0.97	4	0.66	6	0.97	7	2.65
8609																											
29	32.6	0.89		0.5	2			17	0.95	2	0.57	*0	1.6	5	1.56	2	0.80	1	0.77	2	2.87	*0	0.8	*0	1.0	*0	0.1
69	78.0	0.89		1.9	6			22	0.89	13	1.00	6	0.85	5	0.75	4	1.00	4	0.96	4	0.77	3	0.60	5	0.76	3	1.82
8613																											
38	33.4	1.14		1.2	3			14	1.02	7	1.02	3	1.30	6	1.32	1	1.88	3	1.67	2	1.40	1	0.99	1	1.62	*0	0.7
100	82.7	1.21		9.0	8			20	1.05	10	0.79	10	1.33	8	1.11	8	1.49	6	1.37	7	1.28	11	1.44	10	1.32	10	1.71
8705																											
29	32.5	0.89		1.0	2			16	0.90	2	0.57	*0	1.6	3	1.16	1	0.91	2	0.61	*0	0.4	*0	0.7	5	3.33	*0	0.0
52	77.9	0.67		12.9	6 *			19	0.83	6	0.43	5	0.64	3	0.55	2	0.48	1	0.21	2	0.49	7	1.19	3	0.44	4	2.04
8709																											
32	32.6	0.98		1.4	2			18	0.87	1	0.42	2	1.43	2	1.11	3	1.00	1	0.83	*0	0.3	1	0.83	4	5.71	*0	0.0
73	78.1	0.93		1.7	5			29	0.86	11	1.06	4	0.71	8	1.67	5	1.25	1	0.36	4	0.67	5	0.78	6	1.36	*0	0.0
8713																											
28	32.6	0.86		1.1	2			19	0.92	1	0.42	1	1.43	3	1.20	2	0.80	1	0.59	*0	0.3	1	0.83	*0	0.7	*0	0.0
74	78.1	0.95		4.1	6			31	0.97	7	0.66	4	0.78	9	1.58	4	1.08	2	0.57	7	1.19	4	0.56	5	1.08	*1	0.0
8805																											
30	32.5	0.92		0.2	2			16	0.94	4	0.91	2	0.88	2	1.05	1	0.48	2	0.87	*0	0.7	1	2.48	1	0.82	1	3.27
74	78.0	0.95		34.4	6 ***			17	0.72	9	0.69	3	0.42	9	1.13	1	0.30	1	0.24	2	0.54	9	1.39	8	1.42	15	5.21
8809																											
31	30.1	1.03		0.3	3			12	1.03	6	1.01	6	1.30	1	1.63	1	0.62	1	0.54	3	1.44	*0	0.7	1	1.62	*0	0.3
73	77.2	0.95		8.0	7			12	0.91	7	1.04	10	1.08	8	0.81	6	0.74	2	0.54	10	0.95	7	1.17	9	2.24	2	0.33
3372																											
27	27.2	0.99		1.1	2			12	1.03	3	1.16	3	1.33	3	1.11	3	1.07	2	2.25	*0	0.9	*0	1.7	1	0.84	*0	0.5
70	63.1	1.11		4.9	6			11	0.98	11	1.18	6	1.38	5	1.09	5	0.75	5	1.10	9	1.55	6	1.05	2	0.46	10	1.54
3376																											
29	27.8	1.04		1.0	2			13	1.02	1	0.61	6	1.33	2	1.55	2	1.15	2	1.44	*0	1.0	1	0.56	2	1.95	*0	0.6
84	64.3	1.31		9.2	6			14	1.06	9	1.18	9	1.20	6	1.16	5	1.29	7	1.27	7	1.47	9	1.56	7	1.47	11	1.81
3391																											
29	28.6	1.01		0.9	2			14	0.95	1	0.59	4	1.38	2	0.60	1	0.95	4	2.26	1	1.45	*0	0.4	1	0.67	1	2.16
88	67.3	1.31		30.6	6 ***			19	1.05	3	0.89	7	1.02	7	0.98	5	0.76	5	0.91	7	1.34	9	1.90	9	1.77	17	3.58
3395																											
25	28.3	0.88		1.2	2			15	0.95	2	1.22	1	0.68	2	0.50	*0	1.1	1	1.18	2	1.76	*0	0.5	1	0.68	1	2.46
61	65.9	0.93		1.5	5			17	0.93	7	1.04	3	0.66	4	0.62	6	0.68	4	1.53	7	1.33	3	0.67	2	0.45	8	1.85
8905																											
21	24.7	0.85		2.1	2			12	1.04	3	0.86	2	1.35	*0	1.3	2	1.26	2	0.87	*0	0.6	*0	0.7	*0	1.0	*0	0.6
53	54.9	0.96		1.7	6			11	1.06	5	0.96	9	1.19	4	0.87	7	1.15	3	0.56	3	1.24	3	0.97	2	0.42	6	1.08
8909																											
33	24.7	1.33		7.5	2 *			12	1.04	4	1.15	2	1.35	1	0.74	3	1.42	3	1.66	2	3.07	1	1.39	3	3.46	2	2.87
74	54.9	1.35		15.9	6 *			11	1.06	6	1.16	11	1.33	5	1.28	7	1.06	5	1.02	2	0.83	7	2.27	10	2.08	10	1.86
8913																											
27	29.1	0.93		1.3	2			14	1.01	3	0.87	2	0.90	2	1.06	3	1.36	1	0.43	1	1.33	*0	1.3	1	1.75	*0	0.5
64	70.6	0.91		3.8	7			14	0.98	8	1.06	4	0.76	5	0.86	8	1.22	7	0.90	2	0.41	5	0.60	4	0.81	7	1.34
8921																											
23	24.8	0.93		1.3	2			12	1.04	4	1.14	2	1.34	1	0.75	1	0.48	1	0.55	1	1.50	1	1.05	*0	0.8	*0	0.6
46	55.4	0.83		3.7	7			10	0.97	5	0.97	6	0.79	4	1.01	5	0.74	5	0.93	2	0.83	4	1.20	3	0.59	2	0.37

TOTALS			CHI	SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0-9.9
OBS	EXP	O/E	DF	SIG		OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
8925															
25	24.7	1.01		0.4 2		12 1.04	4 1.15	2 1.35	2 1.48	1 0.62	3 1.30	*0 0.6	1 1.40	*0 0.9	*0 0.7
55	54.8	1.00		2.9 6		11 1.06	5 0.96	11 1.33	6 1.33	6 1.09	6 1.11	1 0.41	3 0.98	2 0.44	4 0.73
9009															
30	29.7	1.01		0.4 2		16 1.02	3 1.18	1 0.65	4 1.27	2 1.24	2 1.08	*0 1.1	1 0.87	*0 0.5	1 1.62
66	72.7	0.91		5.2 7		15 0.97	6 0.79	3 0.78	8 0.81	9 1.52	4 0.87	9 0.90	7 1.38	3 0.59	2 0.38
9105															
24	29.3	0.82		1.8 3		9 0.93	2 0.80	4 1.08	4 0.88	*0 2.8	*0 1.9	2 1.21	1 1.03	2 1.76	*0 0.4
48	76.2	0.63		14.2 9		3 0.63	4 0.78	8 0.96	7 0.85	6 0.69	4 0.49	2 0.26	3 0.38	5 0.48	6 0.86
9109															
29	31.6	0.92		2.2 4		10 0.94	6 1.18	2 0.66	5 1.56	2 0.74	1 0.29	3 2.88	*0 0.9	*0 0.7	*0 0.8
77	80.5	0.96		3.7 9		8 1.05	5 0.85	10 0.97	7 1.01	8 1.11	9 1.27	10 1.20	9 0.93	7 0.69	4 0.54
9113															
31	30.3	1.02		0.0 2		17 1.02	2 0.79	1 1.34	3 1.19	1 0.87	5 2.21	*0 0.7	1 0.61	1 0.73	*0 0.6
75	88.0	0.85		6.1 9		14 0.97	14 1.11	8 0.82	8 1.12	3 0.55	5 0.85	8 0.87	4 0.43	8 0.90	3 0.55
9121															
28	31.5	0.89		1.0 3		9 1.01	5 0.95	2 0.88	6 0.90	3 0.92	1 0.73	*0 1.1	2 1.67	*0 1.0	*0 0.5
72	77.7	0.93		7.1 9		6 0.89	8 0.94	8 0.90	7 1.17	4 0.66	14 1.48	4 0.51	4 0.51	9 0.96	8 1.13
9125															
24	29.1	0.82		2.6 2		17 1.01	*0 2.6	2 0.92	2 1.54	1 0.95	*0 0.0	*0 2.1	1 0.70	*0 1.1	1 1.55
71	86.2	0.82		12.3 9		11 0.71	10 0.90	10 1.04	4 0.52	8 1.21	3 0.35	4 0.61	8 1.08	4 0.51	9 1.65
9205															
23	29.1	0.79		2.5 2		13 0.96	2 1.18	2 0.44	2 0.77	1 0.93	*0 2.6	*0 0.7	*0 0.8	2 2.05	1 1.61
45	71.2	0.63		14.7 7 *		8 0.84	9 0.86	1 0.27	5 0.48	5 0.77	1 0.13	*0 6.0	4 0.93	6 0.87	6 1.09
4971															
31	28.2	1.10		0.8 2		13 1.03	2 1.23	3 1.31	4 1.01	1 0.61	3 1.66	3 2.07	*0 1.4	2 2.44	*0 0.6
62	65.7	0.94		8.0 7		13 1.06	11 1.17	7 1.19	6 1.01	6 1.11	5 1.37	6 0.91	4 1.06	4 0.57	*0 5.8
4975															
34	30.0	1.13		1.3 2		13 1.02	5 1.18	4 1.35	5 1.55	2 0.88	2 1.42	2 1.43	*0 0.5	1 1.21	*0 0.4
68	70.1	0.97		3.0 7		18 0.98	8 1.05	7 1.05	7 0.90	8 1.44	3 1.18	5 1.15	5 0.74	5 0.91	2 0.40
4979															
31	30.4	1.02		1.9 3		12 0.94	3 0.59	3 1.33	5 1.28	2 0.91	*0 0.9	*0 1.4	2 3.68	3 3.42	1 2.48
71	71.0	1.00		3.4 7		19 0.98	4 0.59	5 0.67	9 1.07	5 1.13	4 1.48	7 1.31	6 0.92	4 0.75	8 1.72
4983															
37	31.4	1.18		1.9 3		14 1.01	6 1.17	3 1.27	6 1.31	1 0.62	1 2.13	1 0.91	2 1.		

Appendix S (contd)

TOTALS			CHI SQ	DF	SIG	90-100		80-89.9		70-79.9		60-69.9		50-59.9		40-49.9		30-39.9		20-29.9		10-19.9		0-9.9	
OBS	EXP	O/E				OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E
9485																									
32	32.6	0.98	0.2	2		18	0.91	2	0.80	1	0.67	4	1.60	4	1.60	1	0.59	*0	0.3	1	0.83	1	1.43	*0	0.0
70	78.1	0.90	3.8	6		28	0.93	12	1.11	3	0.57	7	0.99	7	1.67	2	0.59	3	0.55	4	0.55	4	0.91	*0	0.0
9581																									
29	31.6	0.92	0.4	2		13	1.04	2	0.48	3	0.81	1	0.55	3	1.11	3	1.06	2	0.97	*0	0.5	*0	0.7	2	4.07
65	78.2	0.83	12.1	9		10	0.87	3	0.45	4	0.59	4	0.52	7	1.03	7	0.91	8	1.17	3	0.32	8	1.04	11	1.56
9585																									
29	31.5	0.92	0.7	3		10	0.87	3	0.71	4	0.90	2	1.09	4	1.22	3	1.32	2	0.99	*0	0.6	*0	0.8	1	1.81
60	78.1	0.77	8.0	8		9	0.79	4	0.95	4	0.44	7	1.09	5	0.60	6	0.95	4	0.57	6	0.63	10	1.13	5	0.71
9607																									
28	26.9	1.04	0.4	2		12	1.04	2	1.16	2	1.32	5	1.33	3	0.91	1	0.73	1	0.66	*0	0.6	*0	0.9	2	3.13
58	61.5	0.94	4.2	6		8	1.04	15	1.16	4	0.88	6	1.06	6	0.98	7	1.78	3	0.75	5	0.86	*0	4.4	4	0.63
9611																									
33	27.9	1.18	1.4	2		11	1.02	4	1.13	2	1.30	5	1.57	6	1.36	4	2.11	1	1.40	*0	0.7	*0	0.4	*0	0.7
71	64.7	1.10	4.8	8		17	1.05	7	1.04	7	1.33	9	1.16	10	1.80	3	0.95	3	0.92	6	1.03	5	0.91	4	0.75
9615																									
39	30.3	1.29	5.8	3		12	1.02	6	1.16	4	1.07	5	1.57	4	1.82	1	1.03	2	1.51	2	3.80	2	2.15	1	2.49
85	70.7	1.20	7.4	7		19	0.99	7	1.04	8	1.07	9	1.15	5	1.01	3	1.16	9	1.66	8	1.33	9	1.65	8	1.61
9619																									
19	33.7	0.56	9.0	3	*	11	0.76	2	0.38	*0	1.5	5	0.85	1	0.59	*0	1.4	*0	0.3	*0	2.2	*0	0.6	*0	0.3
37	81.8	0.45	27.6	9	**	10	0.61	3	0.35	2	0.24	4	0.51	3	0.39	2	0.34	2	0.36	2	0.28	7	0.93	2	0.30
0181																									
41	32.6	1.26	11.6	2	**	18	1.01	3	0.59	*0	0.0	5	1.56	2	0.80	4	2.35	*0	0.3	5	4.17	4	5.71	*0	0.0
79	78.1	1.01	9.1	6		25	0.94	10	0.74	2	0.33	8	1.23	5	1.04	4	1.05	7	1.17	8	1.25	9	2.04	*1	0.0
0185																									
29	32.6	0.89	0.5	2		19	0.92	1	0.42	2	1.43	2	1.11	2	0.67	*0	1.2	*0	0.3	2	1.67	1	1.43	*0	0.0
56	78.1	0.72	9.3	5		28	0.83	6	0.58	2	0.36	5	1.04	4	1.00	*0	2.8	1	0.17	4	0.63	6	1.36	*0	0.0
3381																									
30	27.7	1.08	0.3	1	***	14	1.04	1	0.60	1	1.32	1	1.61	7	0.99	3	1.66	*0	0.0	1	1.37	2	2.27	*0	0.6
61	64.4	0.95	7.3	8		13	0.97	9	0.88	3	0.58	6	1.03	4	0.67	2	0.60	2	0.51	10	1.87	6	1.06	6	1.08
3385																									
32	29.1	1.10	0.6	2		11	1.02	5	1.15	5	1.36	3	1.18	3	0.89	3	1.64	*0	0.4	*0	0.9	*0	0.5	2	2.80
66	67.7	0.97	3.9	8		15	0.92	8	1.04	9	1.08	9	1.38	4	1.03	2	0.73	3	0.53	6	0.98	3	0.57	7	1.30
3389																									
25	29.1	0.86	1.1	2		10	0.93	3	0.84	4	1.07	3	0.93	1	0.30	2	1.09	*0	0.3	2	2.06	*0	0.4	*0	0.8
66	67.8	0.97	1.0	7		17	1.05	7	0.91	7	0.84	8	1.23	2	0.52	3	1.12	6	1.01	4	0.66	6	1.31	6	1.01
3393																									
33	31.9	1.04	0.8	2		13	0.95	5	1.18	4	1.27	2	0.51	1	0.43	2	1.49	2	2.76	*0	1.0	3	2.18	1	4.85
85	75.7	1.12	31.4	9	***	18	0.95	6	0.88	5	0.68	7	0.89	4	0.72	4	0.75	7	1.37	7	1.09	8	1.28	19	3.18
3397																									
35	32.4	1.08	0.8	3		14	1.02	6	1.01	2	0.89	3	0.93	3	1.30	2	1.07	1	2.53	2	1.49	2	1.65	*0	0.2
77	77.5	0.99	2.2	8		16	0.88	8	1.05	7	0.86	6	1.03	6	0.73	6	1.33	8	1.35	5	0.80	6	0.98	9	1.33
5887																									
40	37.3	1.07	0.2	2		20	1.04	9	1.06	1	1.30	3	1.16	3	1.33	1	2.04	1	0.54	1	3.61	1	1.05	*0	0.5
98	99.9	0.98	4.3	9		21	1.01	14	1.03	12	1.14	9	1.06	11	1.26	7	0.92	8	0.98	8	0.96	3	0.36	5	0.94
5891																									
39	39.3	0.99	0.1	2		25	1.00	5	1.16	2	0.92	5	1.26	*0	0.0	1	0.74	1	1.05	*0	0.2	*0	0.6	*0	0.6
95	108.0	0.88	6.1	9		27	1.05	17	0.95	5	0.62	10	0.95	8	0.97	8	0.91	7	0.67	4	0.68	2	0.32	7	1.13
5895																									
40	39.7	1.01	0.0	2		26	1.00	4	1.16	4	0.92	3	1.52	*0	0.0	1	0.72	1	1.05	*0	0.2	1	1.64	*0	0.6
89	109.7	0.81	8.8	9		27	0.98	12	0.73	7	0.64	10	1.28	10	1.01	7	0.77	5	0.53	3	0.52	4	0.63	4	0.64
6981																									
33	31.2	1.06	2.2	3		10	1.01	8	1.05	6	1.33	3	1.16	1	1.73	2	2.07	1	0.49	*0	1.2	*0	1.1	2	2.67
78	77.4	1.01	8.4	9		12	0.91	5	0.84	4	0.77	12	1.09	5	0.83	7	1.03	5	0.78	7	0.84	7	0.93	14	2.00
6985																									
35	30.7	1.14	1.0	3		11	1.02	7	1.20	6	1.33	4	1.21	*0	1.1	*0	0.5	2	3.27	3	1.43	1	0.84	1	1.27
98	77.4	1.27	8.4	9		12	1.06	7	1.15	10	1.34	12	1.40	8	1.12	11	1.57	7	1.13	10	1.05	8	1.39	13	1.56
6993																									
33	30.9	1.07	3.2	3		9	0.91	7	0.93	5	1.34	2	0.52	*0	0.0	*0	1.0	3	2.39	4	2.27	2	2.19	1	1.08
77	77.0	1.00	3.4	9		10	0.88	7	1.02	5	0.83	7	0.77	6	0.91	6	0.78	7	1.20	12	1.30	9	1.42	8	0.99

Appendix S (contd)

TOTALS			CHI	SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9											
OBS	EXP	O/E				DF	SIG	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E							
9703																										
26	29.6	0.88		0.5	2		14	0.89	2	0.79	1	0.66	1	0.53	4	1.44	2	1.10	*0	1.1	1	0.88	*0	0.5	1	1.60
51	72.3	0.71		11.2	8		16	1.04	6	0.79	2	0.52	3	0.35	7	1.00	4	0.80	3	0.39	4	0.59	4	0.79	2	0.37
9711																										
28	33.8	0.83		2.5	3		13	0.96	3	0.72	3	0.58	6	1.30	*0	0.6	*0	2.7	1	1.43	*0	1.0	1	1.38	1	1.79
55	87.9	0.63		21.1	9 *		12	1.06	10	1.06	8	0.77	6	0.77	6	0.55	4	0.45	2	0.30	4	0.54	*0	8.1	3	0.42
9803																										
42	25.7	1.64		30.0	2 ***		14	1.05	2	1.21	1	1.30	2	1.55	3	1.33	4	2.25	4	2.98	4	2.44	5	4.55	3	6.05
85	59.9	1.42		24.4	6 ***		8	0.86	11	1.17	3	1.36	9	1.41	7	1.30	5	1.26	8	1.33	6	1.41	12	1.68	16	2.71
0007																										
27	32.4	0.83		1.2	2		16	0.90	3	0.87	*0	1.6	3	1.16	1	0.91	4	1.22	*0	0.4	*0	0.5	*0	1.3	*0	0.4
58	77.7	0.75		10.2	6		20	0.88	13	0.99	2	0.25	2	0.33	2	0.43	2	0.58	6	1.30	5	0.84	4	0.65	2	0.67

Appendix T χ^2 tests for goodness of fit between the observed and the expected fauna at both BMWP family and species level for the 614 sites in the GB section of RIVPACS III. Internal predictions for each site are based on the TWINSpan classification using species and all families to 35 groups. Sites are identified by a numeric code but also by the name of the site itself (see earlier appendices for more details on the sites.) For each site, the upper line refers to BMWP families and the lower line to species data. Significant differences are indicated with 1, 2 or 3 asterisks. ($P < 0.05, 0.01, 0.001$.)

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
71950100 PENNINGSTON'S											
44 35.9 1.23	4.1 2	13 1.03	4 1.17	11 1.21	3 0.92	6 1.52	1 2.01	*0 0.7	*0 1.1	5 4.84	1 2.76
100 85.4 1.17	11.9 9	12 1.07	12 0.94	9 1.02	5 0.88	9 1.42	9 1.02	16 1.77	8 1.05	15 1.75	5 0.76
01010100 PENCARROW BRID											
32 33.0 0.97	1.1 3	16 1.02	3 0.58	2 0.65	3 1.53	1 0.84	2 1.12	4 1.61	*0 0.8	1 2.18	*0 0.5
76 82.9 0.92	3.5 8	19 1.05	13 1.08	10 0.96	6 0.85	6 0.83	4 0.80	4 0.67	7 1.25	3 0.51	4 0.73
01030100 TUCKINGMILL											
28 33.0 0.85	2.1 2	16 1.02	5 0.66	*0 0.0	2 1.01	2 1.15	1 0.46	2 0.82	*0 0.5	*0 0.6	*0 0.4
59 82.2 0.72	17.1 9 *	16 0.94	13 1.10	8 0.89	8 1.02	6 0.90	3 0.54	2 0.28	1 0.18	*0 5.8	2 0.35
01050100 HELLAND BRIDGE											
35 33.5 1.05	1.1 3	16 1.03	5 0.84	3 1.30	2 1.03	*0 1.2	3 1.33	4 1.56	*0 0.4	2 2.66	*0 0.5
81 83.6 0.97	2.6 7	15 1.04	17 1.11	7 1.05	9 1.06	6 0.77	7 1.41	7 0.95	2 0.43	8 1.02	3 0.49
01070100 BROCTON											
35 37.5 0.93	0.2 2	20 0.95	9 1.07	*0 0.0	1 0.39	1 0.94	2 1.10	1 0.74	*0 0.3	*0 0.4	1 1.78
78 98.2 0.79	8.6 9	18 0.90	16 1.04	9 1.06	9 0.81	6 0.69	3 0.44	3 0.46	6 0.80	6 0.73	2 0.36
02010100 MOSTERTON											
34 30.4 1.12	0.7 3	11 1.02	4 1.19	5 1.12	3 1.58	5 1.12	1 0.73	2 1.17	2 1.88	1 1.69	*0 0.7
86 74.6 1.15	7.6 8	9 1.05	7 1.15	9 1.33	6 0.91	7 0.84	5 1.01	12 1.45	10 1.12	15 1.71	6 0.82
02030100 OATHILL FARM											
32 33.0 0.97	0.8 3	11 1.03	6 1.16	6 0.99	3 1.15	4 1.05	1 0.78	*0 1.1	*0 1.0	1 1.40	*0 0.5
74 80.9 0.91	10.9 8	11 0.97	7 1.04	7 0.94	13 1.19	13 1.43	6 0.98	6 1.35	5 0.62	5 0.52	1 0.14
02050100 BROOM											
43 33.8 1.27	5.1 3	12 1.03	8 1.17	5 1.12	3 1.52	6 1.58	1 0.73	2 1.36	4 3.91	*0 0.5	2 2.61
100 82.7 1.21	10.7 8	12 1.05	10 1.07	6 0.90	11 1.41	17 1.42	6 1.12	4 0.89	15 1.60	15 1.53	4 0.61
02070100 WHITFORD BRIDG											
37 34.2 1.08	3.2 2	15 1.04	5 1.18	5 1.11	3 0.91	3 1.07	*0 0.4	3 1.10	*0 0.2	3 3.02	*0 0.5
86 82.4 1.04	7.8 9	14 1.06	8 1.04	14 1.26	7 1.09	11 1.33	5 0.75	7 1.24	8 1.30	11 1.03	1 0.15
03010100 WARREN FARM											
21 31.4 0.67	8.2 2 *	16 1.02	3 0.71	*0 0.8	*0 2.5	*0 2.1	2 0.77	*0 1.5	*0 0.5	*0 1.2	*0 0.4
59 72.5 0.81	5.8 7	10 0.94	9 0.97	8 1.08	3 0.75	9 1.11	4 0.44	4 0.67	6 0.99	2 0.40	4 0.58
03030100 EXFORD											
32 31.5 1.02	0.0 3	15 1.02	5 1.16	*0 0.8	6 1.32	1 0.48	2 0.88	*0 0.0	2 1.19	1 2.38	*0 0.6
77 73.5 1.05	9.0 8	15 1.04	9 1.15	12 1.21	10 1.26	8 1.21	6 1.02	3 0.66	2 0.50	10 1.70	2 0.30
03050100 EDBROOKE											
29 32.1 0.90	1.4 2	16 1.03	3 1.18	4 1.07	*0 3.2	5 1.54	1 1.05	*0 0.3	*0 1.2	*0 0.8	*0 0.6
72 76.1 0.95	8.5 8	20 1.04	7 1.18	13 1.14	6 0.84	4 0.68	8 1.80	5 1.09	4 0.78	4 0.68	1 0.15
03070100 EXEBRIDGE											
33 32.3 1.02	0.2 3	13 1.02	5 0.99	6 1.30	2 1.04	2 0.87	4 1.25	*0 0.3	*0 1.3	*0 0.3	1 1.79
80 76.4 1.05	3.0 8	20 1.05	10 1.07	10 1.21	6 1.30	7 1.25	6 0.90	7 1.28	6 1.10	5 0.74	3 0.59
03090100 LYTHERCOURT											
32 32.4 0.99	0.3 3	13 0.95	5 0.96	5 1.11	1 1.67	3 1.07	2 0.62	2 1.91	*0 0.4	1 2.11	*0 0.4
74 76.7 0.96	4.6 7	19 0.94	13 1.02	5 1.15	5 1.08	10 1.14	7 1.35	6 1.22	4 0.85	2 0.33	3 0.59
03110100 BRAMFORD SPEKE											
29 33.6 0.86	2.4 3	17 1.04	2 0.59	1 0.32	3 0.78	1 0.58	2 1.51	2 0.92	1 1.47	*0 0.4	*0 0.5
71 80.2 0.88	10.0 7	18 1.05	11 0.99	10 1.02	3 0.67	3 0.53	10 1.49	9 1.30	3 0.62	3 0.44	1 0.15
04010100 FORDMILL FARM											
42 36.5 1.15	1.5 3	18 1.03	9 1.19	4 1.29	2 1.04	3 1.86	4 1.76	1 2.66	1 1.27	*0 0.9	*0 0.5
104 95.1 1.09	4.1 9	16 1.05	17 1.06	11 1.33	11 0.90	9 1.20	8 1.21	11 1.55	6 0.88	9 1.08	6 0.89
04030100 WOODFORD BRIDG											
34 37.1 0.92	0.5 2	17 0.98	9 0.81	1 1.27	3 1.22	1 1.94	2 0.75	*0 0.0	*0 1.1	*0 0.4	1 1.40
87 96.9 0.90	11.1 9	18 1.05	20 1.17	9 0.92	12 1.18	*0 7.0	7 0.97	4 0.60	7 0.89	7 0.97	3 0.45
04050100 KINGSLEY MILL											
39 35.2 1.11	0.8 3	18 1.03	7 1.19	2 1.35	5 1.28	4 1.85	2 1.47	1 0.57	*0 0.3	*0 0.4	*0 0.5
100 87.7 1.14	6.9 8	21 1.04	16 1.18	7 1.16	6 0.76	10 1.51	13 1.55	5 1.17	9 1.22	9 1.28	4 0.62
04070100 HELE BRIDGE											
32 35.0 0.91	0.7 3	17 0.98	5 0.85	2 1.35	4 0.89	2 1.88	2 1.14	*0 1.7	*0 0.5	*0 0.2	*0 0.6
74 87.1 0.85	11.0 9	19 1.04	14 1.02	8 1.16	10 1.17	4 0.67	7 0.88	3 0.54	5 0.84	4 0.52	*0 6.7
04090100 BEAFORD BRIDGE											
28 33.3 0.84	1.6 2	16 0.97	2 0.76	5 1.10	1 0.41	2 0.91	1 0.36	1 1.47	*0 0.9	*0 0.0	*0 0.6
68 79.6 0.85	6.8 8	24 1.04	12 1.17	5 0.85	5 0.87	6 0.83	4 0.60	4 0.89	3 0.61	4 0.66	1 0.19

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
04110100 GREAT TORRINGT														
33	34.2	0.96	0.2	2	17	1.03	4	0.94	3	0.97	2	0.78	2	0.70
75	83.5	0.90	7.9	8	20	1.04	12	1.07	10	1.19	6	1.03	5	0.64
05010100 WHEDDON CROSS														
29	29.5	0.98	1.2	3	13	1.02	6	1.16	*0	2.2	3	0.95	1	0.94
64	69.3	0.92	2.6	7	8	1.03	8	1.04	6	0.75	4	0.52	7	1.18
05030100 TIMBERSCOMBE														
35	31.2	1.12	0.7	3	12	1.03	7	1.16	4	1.05	2	1.59	1	1.96
87	75.4	1.15	10.5	8	8	1.05	12	1.18	12	1.36	5	1.31	7	1.41
05050100 DUNSTER														
30	32.3	0.93	1.5	2	14	1.04	5	1.00	2	1.32	4	1.03	2	0.52
73	78.7	0.93	10.5	8	9	1.05	15	1.19	4	0.90	8	1.23	10	1.07
06010100 PATNEY														
26	31.8	0.82	2.9	2	14	1.03	3	1.17	3	0.66	1	0.50	1	0.35
63	79.2	0.80	11.3	9	12	1.05	8	1.02	5	0.73	9	1.00	2	0.34
06030100 RUSHALL														
34	32.0	1.06	0.6	3	14	1.03	7	1.19	2	1.29	4	1.56	1	0.63
84	80.3	1.05	3.6	9	13	1.06	10	1.08	6	1.13	9	1.25	7	1.05
06050100 BULFORD														
33	34.5	0.96	0.4	3	17	1.03	4	0.78	3	1.32	1	0.38	3	1.09
79	84.9	0.93	4.1	9	14	1.05	13	1.09	9	1.17	8	0.90	6	1.10
06070100 STRATFORD-SUB-														
37	34.6	1.07	0.7	2	19	1.03	3	0.71	3	1.01	2	1.56	3	0.94
82	85.0	0.96	3.1	8	15	0.99	14	1.02	8	1.18	4	0.56	4	1.06
06090100 BREMORE														
36	35.5	1.02	0.4	3	16	1.02	6	0.88	4	1.32	*0	0.7	5	1.26
84	86.5	0.97	5.7	9	16	1.06	14	1.08	10	1.32	5	0.94	6	0.79
06100100 MOORTOWN														
32	34.1	0.94	1.5	3	18	1.02	3	0.59	2	0.86	2	1.02	3	1.84
86	83.3	1.03	6.5	7	19	1.05	9	0.87	7	0.85	3	0.75	7	1.07
06130100 CHRISTCHURCH														
35	37.1	0.94	1.1	2	17	1.02	9	1.17	1	0.34	3	1.61	2	0.63
83	90.5	0.92	5.3	9	15	0.99	17	1.06	5	0.83	8	1.04	7	0.75
07010100 EASTON GREY														
33	30.3	1.09	0.5	2	12	0.96	5	1.19	4	1.07	2	1.58	2	0.92
73	78.4	0.93	7.7	9	10	1.05	10	1.09	8	0.98	8	0.97	1	0.19
07030100 BROCKENBOROUGH														
29	31.3	0.93	1.2	2	11	0.95	3	0.90	5	0.98	1	0.76	5	1.49
64	79.0	0.81	6.2	9	9	1.06	6	1.01	8	0.97	5	0.69	10	0.92
07050100 COW BRIDGE														
37	34.0	1.09	0.6	3	15	1.04	5	1.17	5	1.31	2	1.02	4	0.94
86	83.9	1.03	3.8	8	11	1.06	12	1.08	12	1.22	5	0.77	5	1.02
07070100 GREAT SOMERFOR														
24	32.7	0.73	2.6	2	14	0.96	1	0.24	2	0.44	1	0.79	1	0.92
62	80.5	0.77	9.4	8	10	0.96	14	1.08	5	0.48	2	0.63	2	0.51
07090100 KELLAWAY'S WEI														
32	36.5	0.88	1.3	3	17	1.02	4	0.66	3	0.80	2	0.78	2	0.76
82	89.7	0.91	6.6	8	13	0.98	12	0.83	8	0.96	7	0.84	6	0.65
07110100 LACOCK														
30	34.0	0.88	1.1	2	17	0.97	4	0.94	2	0.66	1	0.51	1	0.63
63	83.3	0.76	13.0	8	19	1.06	11	1.16	5	0.61	3	0.57	3	0.61
07130100 STAVERTON WEIR														
30	31.6	0.95	0.7	2	15	0.89	3	0.70	*0	1.5	3	1.53	1	1.93
76	86.3	0.88	6.0	9	9	0.73	9	0.76	8	0.88	3	0.46	7	0.93
08010100 WOOTTON BRIDGE														
31	34.2	0.91	0.8	3	13	1.03	3	0.52	5	1.12	4	1.06	2	0.88
72	82.0	0.88	5.1	9	8	0.93	8	0.94	10	0.91	6	0.86	6	0.89
08030100 GORDLETON MILL														
39	35.6	1.09	0.6	2	14	1.03	3	1.17	10	1.02	3	1.16	4	1.79
102	85.4	1.19	4.9	9	13	1.06	10	1.19	12	1.23	7	1.07	12	1.36

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
08050100 EFFORD BRIDGE											
33 33.7 0.98	0.6 3	10 0.87	2 0.79	8 1.06	5 1.28	3 1.10	2 1.55	2 1.11	*0 0.8	*0 1.0	1 1.52
84 78.2 1.07	5.7 9	6 1.05	6 1.01	12 1.06	11 1.42	8 0.96	5 0.82	8 0.90	9 0.96	14 1.66	5 0.79
09010100 ABBOTSTONE											
33 32.3 1.02	0.8 2	12 0.95	4 1.18	4 1.32	5 1.28	4 0.90	1 1.10	2 1.30	1 0.79	*0 0.5	*0 0.7
77 79.5 0.97	5.4 9	11 0.97	5 0.95	11 1.23	10 1.19	7 1.27	7 0.88	4 0.52	9 1.36	9 0.82	4 0.59
09030100 CHILLAND											
39 34.1 1.14	2.3 3	16 0.98	5 0.98	2 1.30	5 1.29	3 1.42	1 1.10	2 1.19	2 1.93	1 1.00	2 3.79
83 84.2 0.99	1.3 8	13 1.06	10 0.99	7 0.91	11 0.91	4 0.95	5 0.93	10 1.05	8 0.99	10 1.27	5 0.73
09050100 ITCHEN ST. CRO											
38 35.2 1.08	0.6 2	18 1.02	6 1.01	3 1.02	*0 0.0	4 1.02	1 1.13	3 1.68	1 1.00	*0 0.6	2 3.67
102 86.6 1.18	13.3 9	14 0.92	14 1.16	8 0.82	8 1.25	5 0.93	10 1.06	8 1.14	8 1.11	15 1.99	12 1.83
09070100 OTTERBOURNE WA											
39 38.9 1.00	1.0 3	19 0.97	6 0.99	7 1.18	3 1.60	2 0.93	1 1.14	*0 0.4	*0 1.0	1 1.96	*0 0.4
91 95.4 0.95	10.2 9	18 1.04	15 0.97	17 1.13	8 1.01	8 1.24	7 0.99	9 1.52	5 0.67	4 0.59	*0 6.0
09090100 D/S CHICKENHAL											
43 37.6 1.14	1.5 3	18 1.03	7 1.15	4 0.90	5 1.55	3 1.86	3 1.30	1 2.93	1 0.97	1 2.13	*0 0.6
129 92.5 1.40	24.2 8 **	13 1.04	19 1.18	10 1.20	18 1.45	11 1.54	15 1.85	9 1.81	16 1.79	13 1.71	5 0.79
10010100 U/S LISS STW											
30 32.6 0.92	4.1 3	12 1.02	3 1.16	4 1.06	8 1.34	2 0.68	1 0.43	*0 0.7	*0 0.8	*0 1.4	*0 0.5
74 78.9 0.94	5.9 9	11 1.06	6 1.19	11 1.35	9 1.14	7 0.86	8 1.04	7 1.02	6 0.82	6 0.60	3 0.41
10030100 STODHAM PARK											
36 33.8 1.07	1.3 2	12 1.01	4 1.15	11 1.35	3 1.14	4 1.46	1 0.55	*0 0.7	*0 0.9	1 0.98	*0 0.4
81 81.8 0.99	4.7 9	10 0.94	7 1.18	13 1.33	11 1.20	9 0.97	6 0.83	8 1.30	8 0.86	4 0.53	5 0.74
10050100 DURFORD BRIDGE											
35 34.0 1.03	0.6 3	13 1.02	5 0.85	5 0.97	3 0.92	2 1.28	6 1.89	*0 0.0	*0 0.9	1 1.03	*0 0.4
90 82.8 1.09	3.2 9	12 1.04	10 1.08	8 1.09	8 0.93	12 1.35	10 1.16	5 0.96	11 1.22	10 1.24	4 0.64
10070100 STEDHAM											
33 32.8 1.01	0.3 3	12 1.02	7 1.04	3 1.37	3 0.90	3 0.81	2 1.07	2 1.42	1 1.06	*0 0.3	*0 0.7
79 79.9 0.99	1.5 8	12 1.05	10 1.19	7 0.94	5 1.08	13 1.09	7 0.96	6 1.04	8 0.97	6 0.69	5 0.82
10090100 SELHAM											
35 33.7 1.04	0.1 2	13 1.02	4 0.93	5 1.10	3 0.94	4 0.91	*0 1.4	3 2.88	1 1.47	1 1.63	1 1.28
77 82.3 0.94	7.9 9	10 0.95	9 1.06	7 1.04	5 0.55	12 1.23	4 0.59	5 0.77	9 0.96	5 0.61	11 1.64
10110100 HARDHAM											
42 33.9 1.24	5.7 3	15 1.03	3 0.88	6 1.32	3 1.19	4 1.22	3 1.36	3 2.24	4 4.56	1 2.24	*0 0.7
94 82.6 1.14	4.1 9	12 1.06	9 1.18	12 1.13	6 1.14	7 0.98	10 1.13	9 1.29	13 1.23	11 1.49	5 0.74
10130100 MAGPIE BRIDGE											
35 32.2 1.09	0.8 3	10 1.03	5 0.99	6 1.33	6 1.31	2 1.25	2 0.74	2 1.03	*0 0.7	1 2.00	1 1.12
94 75.9 1.24	11.8 8	5 1.06	7 1.18	12 1.14	13 1.42	6 1.24	6 1.10	7 0.79	11 1.18	11 1.20	16 2.05
11010100 BURWASH WEALD											
35 31.1 1.12	1.1 4	10 1.03	6 1.20	6 1.17	3 1.54	2 1.21	5 1.42	2 1.00	1 1.02	*0 0.2	*0 0.9
84 73.3 1.15	12.4 8	6 1.06	7 1.19	9 0.93	8 1.11	6 1.33	5 1.00	9 0.95	19 2.05	10 1.17	5 0.61
11050100 SEDLESCOMBE ST											
27 32.7 0.82	2.4 3	11 1.03	3 1.16	4 0.67	5 0.88	1 0.46	3 1.30	*0 0.4	*0 1.2	*0 1.1	*0 0.7
70 78.6 0.89	5.6 9	7 1.07	8 1.17	12 1.35	8 1.09	5 0.70	5 0.78	7 0.79	6 0.63	6 0.65	6 0.77
11090100 ETCHINGHAM											
33 31.8 1.04	1.1 3	11 0.87	5 0.98	3 0.80	3 1.59	2 1.22	3 0.85	1 1.47	1 1.05	1 1.82	3 2.99
95 79.0 1.20	37.3 8 ***	7 0.82	6 0.50	9 0.92	3 0.76	8 1.62	5 0.61	14 1.43	12 1.38	9 1.60	22 2.89
11110100 UDIAM											
34 32.9 1.03	0.2 3	14 1.03	6 1.02	3 1.02	2 1.51	4 1.07	3 1.65	*0 1.4	1 2.32	1 1.12	*0 0.8
99 81.0 1.22	10.9 9	12 1.06	8 0.86	6 0.80	9 1.26	8 1.33	9 1.00	10 1.31	11 1.57	14 1.48	12 1.77
11130100 D/S NEWENDEN											
31 31.5 0.99	0.1 2	20 1.01	1 1.18	3 0.98	*0 0.7	1 0.93	1 0.36	2 1.99	1 1.45	*0 0.8	2 2.64
97 87.4 1.11	13.0 9	19 0.99	7 0.75	8 1.04	9 1.02	8 0.93	2 0.40	11 1.30	13 1.62	8 1.27	12 2.03
12010100 MORETON-IN-THE											
26 28.9 0.90	2.3 3	10 1.03	7 1.16	4 1.34	3 0.91	*0 0.6	*0 1.0	1 0.39	*0 1.4	*0 0.7	1 1.62
75 74.8 1.00	8.3 9	10 1.06	8 1.05	5 0.96	13 1.43	9 1.17	3 0.48	6 0.70	11 1.57	7 0.88	3 0.50
12030100 EVENLODE											
32 27.8 1.15	1.0 3	12 1.03	6 1.13	4 1.31	2 1.04	1 1.98	1 1.11	2 1.53	2 1.25	2 2.12	*0 0.7
94 75.8 1.24	9.5 8	9 1.04	10 1.15	13 1.14	9 1.22	7 1.16	10 1.05	10 1.70	13 1.88	10 1.40	3 0.71

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
12070100 FAWLER														
24	33.1	0.73	3.8	3	12	0.82	5	0.73	*0	1.4	1	0.38	1	0.46
55	83.0	0.66	15.9	9	11	0.77	12	1.10	4	0.67	5	0.59	1	0.15
12090100 CASSINGTON														
33	35.5	0.93	1.1	3	15	0.97	4	0.68	3	1.02	3	0.94	3	1.81
80	86.9	0.92	8.6	9	10	0.88	17	1.12	6	0.89	7	1.09	8	1.11
13010100 WOTTON														
31	30.7	1.01	1.2	3	10	1.02	5	1.20	1	0.33	6	1.27	2	1.92
71	72.2	0.98	5.0	8	6	1.05	7	1.17	11	1.13	8	1.22	5	0.99
13030100 U/S ALBURY VIL														
24	33.6	0.71	6.3	2 *	13	1.03	2	0.80	5	0.75	3	0.65	1	0.38
60	80.8	0.74	8.7	9	11	1.05	5	0.97	10	0.90	4	0.60	6	0.61
13050100 WYCK														
31	33.7	0.92	2.9	3	14	1.03	2	0.80	7	1.31	1	0.38	2	0.45
84	82.8	1.01	3.7	9	13	1.06	4	0.67	12	1.35	9	1.09	9	1.15
13070100 TILFORD														
24	33.5	0.72	7.7	3	10	1.01	10	1.06	1	0.27	*0	2.1	*0	1.6
72	82.9	0.87	8.3	8	8	0.94	10	0.99	8	1.31	12	1.02	6	0.99
13090100 EASHING														
29	33.7	0.86	2.3	3	12	0.95	5	0.74	3	1.30	*0	3.2	2	0.90
81	82.7	0.98	7.3	7	9	1.06	11	1.08	9	0.91	3	0.74	6	0.60
13110100 BURPHAM														
27	35.3	0.76	2.4	3	10	0.73	7	1.04	1	0.44	2	0.75	4	0.89
71	85.5	0.83	6.1	9	8	0.77	15	1.03	3	0.49	7	0.99	5	0.70
14030100 CODICOTE BOTTO														
29	32.1	0.90	1.9	3	12	0.95	4	0.79	4	1.07	4	1.52	1	0.92
82	79.6	1.03	3.7	8	9	1.05	11	1.09	4	0.49	9	1.38	2	0.52
14050100 PANSHANGER														
26	31.9	0.81	2.9	2	12	0.82	3	0.88	3	0.78	3	1.60	3	1.13
59	79.5	0.74	6.7	8	10	0.96	7	0.63	6	0.57	3	0.93	5	0.73
14070100 WARE WEIR														
29	33.2	0.87	4.3	2	19	1.02	5	1.18	1	0.43	3	1.51	*0	1.1
77	81.5	0.94	2.6	8	20	1.04	9	0.95	8	1.06	9	1.25	3	0.77
14090100 MEADGATE														
30	33.7	0.89	0.4	2	12	0.89	3	0.86	5	0.96	1	0.50	2	1.19
84	86.2	0.97	4.1	9	8	0.94	12	0.93	5	0.83	6	0.83	4	0.66
14110100 FISHER'S GREEN														
34	34.3	0.99	0.4	2	19	1.02	5	0.99	2	0.90	*0	1.3	1	0.37
76	84.4	0.90	6.6	9	15	0.88	10	0.84	5	0.67	6	0.92	3	0.57
14130100 ENFIELD WEIR														
35	34.7	1.01	1.3	2	16	0.86	6	1.18	2	0.89	1	0.75	3	1.11
104	85.1	1.22	85.6	9 ***	16	0.89	11	0.92	5	0.67	6	1.02	6	1.13
15010100 GARN-LWYD														
34	29.4	1.16	1.2	2	14	1.03	4	1.15	5	1.31	*0	0.0	2	1.22
126	70.4	1.79	62.1	8 ***	8	1.05	11	1.17	7	1.35	13	1.56	9	1.83
15030100 LLANGENDIRNE														
42	34.5	1.22	3.4	2	15	1.04	4	0.94	8	1.34	4	1.57	2	0.86
134	86.4	1.55	49.8	9 ***	15	1.06	9	1.17	15	1.34	11	1.40	9	1.10
15050100 U/S KIDWELLY														
39	33.1	1.18	1.8	2	14	1.03	4	1.17	8	1.34	5	1.53	5	1.77
114	79.6	1.43	25.6	8 **	9	1.05	16	1.17	7	1.32	13	1.34	16	1.82
16010100 STRATA FLORIDA														
29	32.2	0.90	1.1	3	15	1.02	6	1.18	1	0.45	2	0.51	1	0.90
71	79.8	0.89	3.9	9	19	1.05	12	1.00	4	0.55	8	0.88	5	0.90
16030100 TREGARON BOG														
36	38.1	0.94	0.2	2	21	0.92	6	0.87	*0	0.0	3	1.14	2	1.21
105	100.9	1.04	7.5	9	18	0.95	16	0.93	7	0.63	9	0.87	7	0.91
16050100 PONT GOGOYAN														
43	33.2	1.30	6.7	3	13	1.02	9	1.18	3	0.99	6	1.60	1	0.91
100	80.8	1.24	10.8	8	19	1.05	10	1.07	13	1.23	6	1.16	9	1.50

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI	SO	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
16070100 ALLTYBLACCA												
45 32.6 1.38	11.4 3 **		13 1.02	8 1.18	5 1.33	4 1.64	3 1.78	3 1.68	5 2.92	3 4.25	1 2.22	*0 0.5
128 78.5 1.63	65.7 8 ***		20 1.00	9 1.19	13 1.33	5 1.26	11 1.77	8 1.46	18 2.73	12 2.15	21 3.06	11 1.68
16090100 BANGOR TYFI												
37 32.8 1.13	0.8 3		13 1.02	8 1.18	5 1.32	3 0.96	2 1.75	1 0.72	2 1.40	2 1.51	1 2.07	*0 0.6
99 79.4 1.25	11.9 7		18 1.05	9 1.15	18 1.27	4 1.07	8 1.47	7 1.72	11 1.56	12 1.86	7 1.08	5 0.72
16110100 LLECHRYD												
44 36.4 1.21	3.3 3		19 1.04	8 1.18	5 1.30	2 1.59	2 1.28	1 0.59	3 2.94	2 1.90	1 3.98	1 1.54
129 92.3 1.40	25.6 9 **		19 1.06	16 1.17	12 1.22	9 1.37	14 1.59	10 1.47	10 1.65	13 1.50	16 2.44	10 1.34
17010100 MELIN-Y-WIG												
31 27.9 1.11	0.9 2		14 1.03	2 1.20	4 1.30	3 1.55	2 1.25	3 1.63	*0 1.3	*0 1.0	3 2.74	*0 0.7
91 63.6 1.43	18.1 6 **		11 1.05	4 1.20	8 1.33	10 1.50	9 1.82	15 1.67	8 2.25	9 1.34	10 1.73	7 0.97
17030100 NANTCLWYD HALL												
35 31.2 1.12	1.0 2		13 1.03	4 0.95	5 1.34	3 1.14	2 0.95	2 0.75	1 1.36	1 1.98	4 2.73	*0 0.5
79 73.6 1.07	3.0 7		10 1.06	11 1.08	8 1.36	11 1.23	6 1.41	7 0.86	7 1.18	4 0.87	6 0.71	9 1.16
17050100 ABOVE RUTHIN												
30 32.3 0.93	0.7 2		16 1.04	1 0.39	4 0.89	5 0.96	*0 0.6	*0 0.0	1 0.75	2 1.33	1 1.34	*0 0.5
70 75.9 0.92	3.0 8		12 0.97	13 1.01	7 1.03	5 0.86	5 0.65	5 0.80	4 0.96	7 1.06	8 1.26	4 0.58
17070100 GLAN-Y-WERN												
35 33.1 1.06	0.4 2		17 1.04	1 0.58	7 1.17	5 1.27	*0 0.6	*0 0.8	2 3.00	3 1.53	*0 0.7	*0 0.4
97 77.9 1.24	6.4 8		13 1.06	15 1.10	9 1.34	9 1.28	11 1.37	6 1.34	4 0.94	10 1.34	10 1.54	10 1.35
17090100 PONT LLANERCH												
37 33.2 1.11	0.6 3		15 1.03	6 1.17	5 0.98	4 1.56	2 1.14	*0 0.0	3 2.01	1 0.67	1 1.07	*0 0.2
91 77.3 1.18	9.3 8		14 1.06	16 1.18	7 0.95	8 1.04	9 1.48	6 1.36	11 1.93	4 0.60	8 1.23	8 1.29
18070100 KETFORD												
26 28.1 0.93	0.3 2		14 0.98	4 0.94	*0 0.8	1 0.52	2 1.22	1 1.16	2 1.53	2 1.43	*0 0.7	*0 0.9
59 76.3 0.77	6.2 8		10 0.96	7 0.92	7 0.76	12 1.14	1 0.26	9 0.85	3 0.57	5 0.66	3 0.52	2 0.38
18090100 UPLEADON												
33 37.6 0.88	1.2 3		17 0.97	6 1.00	3 0.81	3 0.64	*0 1.1	1 0.54	2 1.90	*0 0.5	*0 0.8	1 2.20
78 92.7 0.84	5.8 8		13 0.97	13 0.97	11 0.87	9 0.76	2 0.52	8 0.87	2 0.33	5 0.62	8 1.00	7 1.14
19010100 PERRY FARM												
30 31.5 0.95	0.2 2		11 0.94	5 1.14	5 0.98	2 1.01	4 1.04	*0 0.0	3 1.38	*0 1.2	*0 0.6	*0 0.6
79 77.2 1.02	2.3 8		9 1.05	10 0.96	8 0.98	5 0.84	4 0.82	7 0.87	8 1.05	9 1.08	9 1.04	10 1.51
19030100 REDNAL MILL												
31 31.9 0.97	1.3 2		13 1.04	3 1.19	7 1.16	1 0.79	3 1.11	3 0.92	1 0.57	*0 0.3	*0 0.8	*0 0.8
74 80.4 0.92	10.6 9		11 1.06	7 1.05	12 1.25	7 1.37	12 1.21	4 0.63	10 1.21	4 0.47	5 0.62	2 0.27
19070100 MILFORD												
30 32.9 0.91	1.4 3		13 1.04	9 1.18	*0 0.7	3 0.90	1 0.38	1 0.53	3 1.37	*0 0.8	*0 0.5	*0 0.7
78 82.2 0.95	2.4 8		13 1.06	10 1.08	10 1.11	9 0.93	5 1.32	4 0.63	6 0.64	7 0.89	7 0.93	7 1.00
19090100 MYTTON												
27 31.3 0.86	4.7 2		13 1.04	8 1.07	*0 0.0	3 1.15	2 0.90	*0 2.2	1 0.44	*0 1.2	*0 0.3	*0 0.5
73 79.2 0.92	6.1 9		10 1.04	14 1.10	8 1.07	6 0.78	7 1.26	6 0.97	10 1.23	4 0.42	4 0.68	4 0.63
20010100 COOKSHILL												
23 29.6 0.78	1.5 2		11 0.81	3 0.72	*0 0.8	3 1.12	1 0.62	*0 2.0	1 0.74	2 0.86	*0 0.5	2 3.01
49 69.1 0.71	12.3 9		8 1.06	5 0.66	6 1.01	6 0.93	5 0.90	4 0.43	6 1.04	2 0.31	1 0.15	6 0.78
20030100 CRESSWELL												
28 32.0 0.88	2.5 3		11 1.02	7 1.15	6 1.32	*0 2.6	1 0.89	2 0.63	1 0.51	*0 0.8	*0 0.6	*0 0.4
61 78.8 0.77	12.7 9		12 1.04	11 0.93	7 1.18	4 0.44	8 1.11	7 1.06	4 0.77	5 0.60	2 0.27	1 0.17
20050100 FIELD												
32 32.0 1.00	0.5 3		12 1.03	5 0.96	5 1.11	3 1.12	2 1.27	2 0.64	1 0.67	1 1.25	*0 0.4	1 1.91
92 78.8 1.17	10.7 9		13 1.04	11 0.93	7 1.18	10 1.29	9 1.16	4 0.63	9 1.54	15 1.86	9 1.36	5 0.81
20070100 NEWTON												
33 31.9 1.03	1.6 3		12 1.02	6 1.14	3 0.57	3 1.52	*0 1.0	7 1.97	*0 1.8	1 1.98	*0 0.3	1 2.15
88 78.7 1.12	4.4 9		13 1.04	15 1.18	8 1.10	8 1.14	6 0.90	9 1.43	8 1.24	11 1.47	6 0.93	4 0.70
20090100 HAMSTALL RIDWA												
33 32.1 1.03	0.1 2		13 1.03	5 1.15	6 1.14	2 1.00	*0 1.1	6 1.52	*0 1.4	1 1.98	*0 0.4	*0 0.5
83 78.9 1.05	6.4 9		14 1.04	13 1.18	6 1.01	12 1.42	9 1.24	6 0.94	9 1.54	6 0.79	5 0.70	3 0.51
21030100 COLSTON BASSET												
29 29.3 0.99	0.9 3		13 1.03	5 0.98	2 0.89	2 1.59	3 1.34	1 1.12	3 1.02	*0 0.2	*0 0.9	*0 0.9
87 77.0 1.13	5.5 9		12 1.06	7 1.20	10 1.01	11 1.45	7 1.07	10 1.27	13 1.57	6 0.96	5 0.80	6 0.85

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI	SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG		OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
21070100 KNIPTON															
28	30.0	0.93		0.7	3	10 1.01	5 1.17	2 0.90	4 0.71	2 0.74	*0 1.3	3 2.21	1 0.92	*0 0.9	1 1.75
62	72.3	0.86		5.9	9	9 1.04	7 1.01	7 1.05	5 0.86	5 0.81	7 1.09	6 0.79	9 1.09	3 0.36	4 0.53
21090100 BOTTESFORD															
36	32.5	1.11		0.9	3	13 1.03	4 1.20	3 1.38	5 0.95	3 0.67	3 2.36	2 1.48	1 2.23	*0 0.9	2 3.32
79	79.2	1.00		6.6	8	12 1.05	3 1.12	10 1.01	8 0.88	4 0.61	4 0.63	8 1.05	15 1.53	6 0.66	9 1.33
21110100 HAWTON															
28	31.8	0.88		2.2	2	16 1.03	5 1.19	1 1.31	1 0.39	1 0.46	2 0.75	1 0.93	*0 1.2	1 1.64	*0 0.9
60	82.4	0.73		13.5	8	8 0.96	16 1.11	7 0.85	5 1.10	4 0.82	4 0.49	3 0.42	7 0.71	5 0.57	1 0.12
22010100 GLUTTON BRIDGE															
34	31.1	1.09		0.4	2	17 1.02	3 1.17	2 1.29	3 1.17	2 1.18	2 1.08	2 1.10	2 2.12	1 1.41	*0 0.7
80	71.3	1.12		7.7	8	13 1.04	5 0.97	13 1.34	8 1.36	2 0.34	14 1.42	5 0.87	6 1.06	5 1.06	9 1.47
22030100 HARTINGTON															
31	31.7	0.98		2.5	3	13 1.03	3 1.14	5 0.93	4 1.21	4 1.45	1 0.45	*0 0.0	*0 1.5	*0 0.9	1 2.46
72	75.9	0.95		3.9	8	13 0.99	9 1.05	5 0.75	7 0.82	6 1.20	9 1.27	3 0.48	7 1.19	9 1.10	4 0.61
22050100 DOVE DALE															
36	31.8	1.13		2.3	2	13 0.96	4 0.96	4 1.34	3 0.91	5 1.53	3 1.70	*0 0.0	1 0.70	*0 0.9	3 7.14
86	76.4	1.12		5.8	8	13 0.99	9 1.05	7 1.06	9 1.06	5 1.15	7 0.75	8 1.50	9 1.68	10 1.14	9 1.41
22070100 U/S ROCESTER															
35	31.8	1.10		1.2	3	13 1.04	5 1.17	4 1.32	4 1.02	4 1.87	3 1.26	*0 0.7	1 0.62	*0 0.9	1 3.28
78	76.0	1.03		11.9	7	14 1.07	9 1.18	8 1.08	11 1.41	7 1.61	12 1.22	6 1.34	2 0.30	8 0.95	1 0.16
22090100 SUDBURY															
36	31.8	1.13		1.2	3	13 1.03	5 1.16	5 1.31	4 1.52	4 1.23	3 1.34	1 1.59	1 0.89	*0 1.1	*0 0.2
76	75.4	1.01		12.3	7	13 0.99	8 1.04	10 1.21	9 1.14	7 1.61	12 1.39	4 0.83	10 1.44	3 0.40	*0 6.3
22110100 MONK'S BRIDGE															
25	32.6	0.77		5.5	3	12 0.89	3 1.18	4 1.30	2 0.38	3 1.37	1 0.44	*0 1.1	*0 2.1	*0 0.3	*0 0.3
62	78.6	0.79		10.4	8	11 0.97	7 0.82	8 1.08	8 0.78	4 0.95	5 0.53	8 1.53	6 0.66	2 0.32	3 0.45
23010100 GREAT YELDHAM															
28	27.4	1.02		0.3	3	11 0.95	6 1.16	3 0.99	1 0.52	1 1.95	1 2.13	2 1.47	1 0.54	1 1.53	1 1.14
87	74.3	1.17		7.8	9	8 1.04	10 0.98	7 0.85	8 0.86	8 1.50	12 1.22	10 1.76	9 1.22	8 1.53	7 1.30
23030100 D/S HEDINGHAM															
30	32.1	0.94		0.6	3	12 1.03	8 1.05	2 0.87	3 1.17	*0 1.7	2 0.65	*0 0.0	2 1.36	*0 0.9	1 1.24
82	79.9	1.03		6.3	9	9 1.05	7 0.81	7 1.01	11 1.07	6 0.84	7 1.13	11 1.17	12 1.69	8 1.04	4 0.51
23050100 EARL'S COLNE															
31	32.7	0.95		3.1	2	18 1.03	5 1.17	3 1.01	3 1.57	2 1.82	*0 1.4	*0 1.1	*0 0.7	*0 1.3	*0 0.5
78	80.9	0.96		9.5	9	18 1.05	12 1.17	7 0.95	7 1.18	9 1.47	10 1.31	4 0.61	2 0.29	7 0.94	2 0.36
23070100 FORDSTREET BRI															
27	32.9	0.82		2.1	2	18 0.97	3 0.72	2 0.89	*0 1.9	1 0.90	*0 1.4	1 0.92	*0 0.7	1 0.77	1 2.24
76	81.1	0.94		6.2	8	18 1.05	13 1.17	7 0.95	7 1.07	5 1.01	10 1.12	4 0.74	4 0.62	2 0.26	6 1.09
24010100 RUCKLAND															
26	29.1	0.89		2.1	2	11 1.01	3 0.90	1 0.67	1 0.26	6 1.21	1 1.06	*0 1.3	2 1.83	1 2.07	*0 0.7
70	70.5	0.99		6.8	8	12 1.05	5 1.16	5 0.94	5 0.70	5 0.81	7 1.09	13 1.60	8 1.24	7 0.87	3 0.42
24030100 SWABY															
26	29.7	0.88		1.9	2	11 1.01	5 1.20	1 1.39	5 1.12	1 0.23	1 1.06	1 0.56	1 0.85	*0 0.5	*0 0.7
80	72.4	1.10		7.5	8	11 1.05	7 1.17	8 1.35	7 0.98	5 1.03	11 1.63	9 1.37	9 0.97	10 1.23	3 0.41
24050100 BELLEAU															
30	31.8	0.94		0.2	3	12 0.94	5 0.97	3 0.79	3 1.57	2 0.93	2 0.89	*0 1.5	*0 0.7	2 2.82	1 1.11
82	79.2	1.04		15.6	8 *	10 0.96	9 0.82	7 0.78	2 0.50	5 0.77	6 0.88	9 0.89	10 1.24	7 1.18	17 2.32
24090100 THEDDLETHORPE-															
30	31.5	0.95		1.1	2	19 1.01	1 0.58	2 0.66	*0 0.7	1 0.91	3 0.96	1 3.06	*0 1.2	1 1.04	2 3.05
87	86.5	1.01		3.6	8	13 0.91	10 0.91	11 1.11	3 0.65	9 1.07	9 0.90	6 1.16	9 0.85	7 1.08	10 1.68
25050100 LITTLE BYTHAM															
28	32.1	0.87		3.8	3	14 1.03	2 0.78	4 1.05	2 0.74	5 1.29	*0 2.6	1 1.01	*0 0.4	*0 0.7	*0 0.8
56	79.7	0.70		15.3	9	11 0.97	8 1.15	5 0.74	8 0.94	4 0.60	7 0.86	7 0.93	2 0.30	2 0.19	2 0.30
25070100 BANTHORPE LODG															
28	32.1	0.87		1.0	3	14 0.96	5 0.86	1 1.27	3 1.15	1 0.47	3 0.93	1 1.48	*0 0.6	*0 1.0	*0 0.8
54	80.1	0.67		13.0	9	13 0.98	6 0.64	4 0.76	3 0.42	6 1.17	8 0.76	4 0.52	2 0.35	4 0.45	4 0.56
25090100 SOUTH OF TWENT															
26	31.5	0.83		2.7	2	20 1.01	1 1.18	2 0.65	*0 0.7	*0 1.1	3 1.08	*0 1.0	*0 0.7	*0 0.8	*0 0.7
92	87.6	1.05		3.2	9	21 1.04	10 1.18	6 0.78	13 1.36	9 1.11	4 0.79	8 0.83	9 1.30	6 0.95	6 1.07

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
25130100 MARSTON TRUSSE													
25	27.9	0.90	3.6 2	12	1.03	5	1.19	5	1.33	1	0.51	*0	0.7
69	74.2	0.93	9.9 8	8	1.05	12	1.18	6	1.00	15	1.44	4	0.16
25210100 TINWELL													
32	34.3	0.93	1.3 3	16	0.97	6	1.16	4	1.07	*0	1.2	3	0.5
64	84.6	0.76	14.1 9	15	1.06	11	1.08	9	1.18	8	0.86	2	0.43
25230100 CROWLAND													
27	31.5	0.86	2.0 2	19	1.01	1	0.58	2	0.66	1	1.47	1	1.39
84	86.8	0.97	7.1 8	16	1.04	12	1.09	9	0.91	5	1.28	8	0.87
26010100 SOUTH RAYNHAM													
31	29.6	1.05	1.7 2	11	0.94	4	1.22	4	1.31	4	1.52	3	0.8
71	75.2	0.94	7.6 9	10	1.06	6	1.01	8	1.07	4	0.69	9	0.95
26050100 GREAT RYBURGH													
25	31.7	0.79	3.1 3	14	0.96	3	0.60	2	0.90	1	1.54	3	1.1
57	79.1	0.72	12.5 8	10	0.88	11	0.81	8	0.97	2	0.63	9	0.28
26070100 WORTHING													
29	31.7	0.91	1.1 3	14	0.96	5	1.00	2	0.90	1	1.54	4	1.1
79	79.1	1.00	3.3 8	12	1.05	13	0.96	9	1.10	4	1.26	8	0.42
26090100 NORTH OF ELSIN													
31	31.9	0.97	0.8 2	14	1.03	4	0.93	5	1.29	2	1.05	2	1.0
78	79.6	0.98	11.7 8	12	1.05	12	1.02	11	1.21	4	1.53	10	7.1
26110100 TAVERHAM													
29	32.5	0.89	2.2 2	13	0.96	5	1.15	5	0.82	1	0.73	3	0.6
74	80.5	0.92	10.4 9	12	1.05	8	0.94	9	1.00	4	0.75	9	7.0
26190100 NORTH OF BARFO													
32	32.2	0.99	0.9 3	12	1.03	9	1.06	2	1.28	4	1.19	1	0.6
77	80.1	0.96	16.2 8 *	10	1.05	11	1.17	7	0.93	14	1.55	8	7.9
26210100 EARLHAM													
37	32.8	1.13	0.8 2	15	1.03	9	1.17	2	1.33	4	1.26	1	0.5
91	81.0	1.12	9.5 9	14	1.05	10	1.16	12	1.24	10	1.40	8	0.43
27030100 SLAIDBURN													
29	30.0	0.97	0.7 2	13	1.02	3	1.15	4	0.91	4	1.27	3	0.7
75	69.0	1.09	5.9 7	15	1.05	8	1.03	9	1.09	10	1.29	6	0.33
27050100 D/S LANGDEN BR													
32	29.7	1.08	0.4 2	14	1.03	2	1.14	3	0.83	6	1.58	3	1.12
69	68.1	1.01	3.2 7	18	1.00	6	1.01	10	1.12	8	1.25	6	0.54
27070100 HIGHER HODDER													
32	30.8	1.04	0.1 2	14	1.03	3	1.19	5	0.97	4	1.02	2	0.6
72	70.7	1.02	10.6 7	19	1.06	8	1.19	7	1.17	12	1.33	6	6.6
27090100 CAM END													
27	26.2	1.03	0.3 2	14	1.03	2	1.21	3	1.04	2	1.46	*0	3.59
54	58.8	0.92	5.3 7	10	1.04	9	1.17	8	1.32	6	1.31	3	0.86
27110100 HORTON IN RIBB													
25	27.6	0.91	1.5 2	13	1.03	2	1.19	2	1.32	3	0.93	1	1.34
62	62.5	0.99	1.1 6	13	1.05	10	1.06	6	1.36	3	0.89	8	0.82
27130100 CLEATOP BARNS													
39	30.4	1.28	5.0 2	14	1.03	3	1.19	5	1.36	6	1.31	3	3.14
82	70.1	1.17	6.4 8	18	1.06	8	1.17	8	1.33	12	1.42	8	0.80
27150100 HALTON BRIDGE													
35	30.9	1.13	0.8 2	14	1.03	4	1.22	4	1.07	6	1.50	1	0.5
86	71.1	1.21	4.6 8	17	1.01	8	1.18	8	1.19	11	1.22	3	1.34
27170100 SAWLEY BRIDGE													
38	30.8	1.23	2.7 2	14	1.03	3	1.20	6	1.32	6	1.50	2	0.6
84	70.9	1.18	6.6 8	17	1.06	9	1.17	8	1.33	12	1.16	4	0.91
27190100 MITTON BRIDGE													
26	31.2	0.83	4.8 2	14	1.03	3	1.19	5	0.95	3	0.90	*0	0.3
58	72.0	0.81	11.4 8	13	0.92	11	1.16	8	1.07	8	0.90	2	0.31
27210100 RIBCHESTER BRI													
30	32.5	0.92	2.2 3	13	1.03	6	0.99	5	1.32	3	0.91	2	0.2
72	75.1	0.96	9.2 7	15	1.06	10	0.98	13	1.24	4	0.78	10	0.66

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
28010100 HUG BRIDGE														
32	33.3	0.96	0.8	2	16	1.02	5	1.00	3	1.01	1	0.31	1	0.93
80	80.9	0.99	3.6	8	18	1.04	14	1.20	8	0.98	9	0.99	3	0.91
28150100 BEAM BRIDGE														
29	37.6	0.77	4.4	3	13	0.95	8	1.04	4	0.88	1	0.26	1	0.30
67	93.4	0.72	12.4	9	9	0.95	10	0.84	9	0.70	3	0.39	8	0.80
29010100 GRANGE-IN-BORR														
21	28.6	0.73	6.9	2 *	13	1.02	4	1.22	3	0.79	*0	1.3	1	1.02
55	66.4	0.83	7.3	6	14	1.05	7	0.90	5	0.54	6	1.36	5	0.90
29030100 HIGH STOCK BRI														
28	30.2	0.93	1.0	2	11	1.02	3	0.86	4	1.03	5	1.13	3	0.76
75	69.9	1.07	4.0	7	15	1.05	11	1.08	7	0.93	7	1.10	5	1.15
29050100 OUSE BRIDGE														
28	30.4	0.92	1.7	3	9	0.83	7	1.19	2	1.33	5	1.13	1	0.26
61	70.4	0.87	7.1	7	11	0.82	8	0.78	8	0.96	5	1.12	3	0.49
29070100 COCKERMOUTH														
33	30.1	1.10	1.2	2	12	1.02	5	1.21	3	1.31	5	1.53	1	0.23
74	69.2	1.07	2.7	7	16	1.05	11	1.17	9	1.19	7	1.38	3	0.54
29090100 RIBTON HALL														
30	30.0	1.00	2.2	2	12	1.02	2	0.58	5	1.33	6	1.54	1	0.37
79	68.9	1.15	6.1	6	18	1.06	8	1.17	10	1.21	8	1.22	3	0.69
29110100 WORKINGTON														
31	30.0	1.03	0.1	2	12	1.02	4	1.15	5	0.97	4	1.28	1	0.61
66	69.0	0.96	4.9	7	18	1.05	5	0.73	8	0.90	7	1.19	5	1.03
30010100 ENNERDALE BRID														
24	31.0	0.77	2.9	2	15	1.03	1	0.40	3	0.79	2	0.62	2	0.73
54	71.8	0.75	10.9	7	19	1.00	4	0.81	13	1.16	3	0.59	2	0.40
30030100 U/S KEEKLE														
21	30.7	0.68	6.0	2 *	12	0.88	2	1.15	3	1.00	1	0.17	2	0.72
46	70.7	0.65	14.5	7 *	16	0.99	5	0.65	8	1.06	5	0.64	2	0.46
30050100 D/S KEEKLE														
24	30.2	0.79	3.0	2	13	0.96	1	0.57	2	0.68	6	1.02	1	0.37
55	69.4	0.79	5.8	7	15	0.98	9	0.95	5	0.67	3	0.46	4	0.88
30070100 BRAYSTONES														
26	31.1	0.84	3.1	2	14	1.03	3	1.18	4	0.78	3	0.75	*0	1.1
51	72.1	0.71	13.4	8	18	1.00	6	0.89	4	0.54	6	0.84	6	1.18
31010100 LANGDALE END														
30	32.5	0.92	1.7	2	14	1.03	2	0.59	6	1.31	4	1.03	2	0.92
81	78.5	1.03	4.6	8	11	1.05	10	0.90	8	1.33	10	1.02	8	0.92
31030100 WEST AYTON														
30	33.2	0.90	1.3	3	12	1.03	4	1.17	2	0.45	5	1.09	1	0.26
83	81.0	1.02	1.7	9	8	1.06	10	1.16	7	1.06	7	0.83	11	1.16
31050100 YEDINGHAM														
31	31.9	0.97	0.3	2	13	0.89	4	1.18	2	0.52	1	1.53	4	1.19
85	79.6	1.07	18.6	8 *	11	1.05	10	0.78	5	0.55	3	0.93	5	0.78
31070100 NORTON														
39	33.6	1.16	5.0	2	16	1.03	2	1.15	4	0.90	2	0.62	4	1.04
103	91.9	1.12	57.8	8 ***	15	0.92	5	0.58	10	0.89	4	1.03	11	0.84
31090200 STAMFORD BRIDG														
41	35.3	1.16	1.3	3	12	1.02	8	1.18	2	1.31	6	1.02	4	1.78
109	91.2	1.20	12.9	8	11	1.05	10	1.18	12	1.14	4	0.87	15	1.54
31110100 THORGANBY														
38	33.0	1.15	7.6	3	14	0.96	2	0.59	2	0.90	3	1.19	4	1.00
94	88.3	1.07	12.8	8	16	1.06	6	0.55	5	0.85	5	1.12	7	0.71
32050100 LEALHOLM														
33	31.0	1.06	0.2	2	14	1.02	5	1.19	2	0.66	2	1.04	4	1.45
84	73.1	1.15	10.1	8	17	1.05	7	1.15	13	1.15	7	1.20	7	1.14
32070100 BRIGGSWATH														
30	32.0	0.94	1.0	2	13	1.02	3	0.87	6	0.89	3	1.13	2	1.72
73	74.9	0.98	3.6	7	15	1.05	12	1.01	5	0.85	11	1.23	3	0.69

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
33010100 KELD														
20	26.6	0.75	6.1	2 *	13 1.02	3 1.19	3 1.01	1 0.72	*0 1.6	*0 1.3	*0 1.5	*0 1.0	*0 0.9	*0 0.7
51	59.9	0.85	3.7	7	14 1.06	5 0.85	7 1.03	3 0.93	5 0.82	2 0.38	6 1.31	1 0.23	3 0.58	5 0.92
33030100 OXNOP														
25	27.7	0.90	0.9	2	13 1.03	1 1.18	1 0.44	5 1.10	2 0.73	1 0.45	*0 0.4	1 2.01	*0 0.9	1 1.50
62	62.7	0.99	1.0	6	14 1.05	8 1.04	5 0.85	5 1.29	7 0.89	5 0.98	4 1.38	4 0.70	6 1.38	4 0.67
33050100 GRINTON														
23	28.3	0.81	3.1	2	13 1.03	1 0.59	1 0.45	5 1.30	*0 4.0	1 0.71	*0 0.7	1 1.97	*0 0.8	1 1.74
57	64.2	0.89	7.3	7	13 1.04	7 0.74	6 0.80	7 1.36	5 0.65	1 0.39	*0 3.7	6 1.12	5 1.09	7 1.22
33070100 U/S RICHMOND														
24	28.7	0.84	1.5	2	13 1.03	2 0.78	2 1.36	2 0.51	4 0.88	*0 1.3	*0 0.0	1 1.28	*0 0.8	*0 0.7
59	65.1	0.91	4.4	7	13 0.97	9 0.88	9 1.32	6 0.78	5 1.14	2 0.66	4 0.83	2 0.49	7 1.27	2 0.40
33090100 MORTON-ON-SWAL														
26	32.9	0.79	2.5	2	14 0.97	2 0.78	4 0.75	2 0.78	2 0.59	*0 0.5	2 0.95	*0 1.4	*0 0.4	*0 0.2
73	77.6	0.94	3.7	8	14 1.00	10 1.19	9 0.92	7 1.05	6 0.85	4 0.53	3 0.87	10 1.25	7 1.00	3 0.53
33110100 TOPCLIFFE														
37	33.1	1.12	0.7	3	15 1.03	3 1.20	7 1.31	4 1.26	2 0.88	2 1.15	1 0.59	2 1.43	*0 0.3	1 7.63
88	78.3	1.12	4.1	8	13 1.06	10 1.07	14 1.25	7 1.08	7 1.07	9 1.11	3 0.74	6 0.82	11 1.59	8 1.32
33130100 ALDWARK TOLL B														
27	34.4	0.78	2.8	3	14 0.96	3 0.88	3 0.81	3 0.77	1 0.37	*0 2.3	2 1.22	*0 0.8	1 1.29	*0 0.5
80	93.3	0.86	6.3	8	14 0.96	10 1.07	9 0.80	7 1.09	10 1.07	3 0.32	9 0.81	5 0.69	10 1.01	3 0.65
33150100 NETHER POPPLET														
30	33.7	0.89	0.6	2	15 0.96	2 0.78	5 0.84	1 0.52	2 0.53	*0 0.0	1 0.92	3 1.47	*0 0.3	1 2.44
84	93.9	0.89	4.3	8	23 1.03	5 0.98	9 0.67	7 1.10	6 0.64	7 0.68	8 1.18	9 0.82	6 1.44	4 0.75
33170100 ACASTER MALBIS														
29	33.8	0.86	2.0	2	15 0.96	3 1.18	2 0.44	2 0.60	2 0.53	*0 0.0	1 0.58	3 2.03	1 3.30	*0 0.5
85	93.9	0.91	7.1	8	22 1.04	7 1.17	5 0.47	7 0.77	5 0.56	8 0.75	7 0.99	11 1.04	8 1.86	5 0.90
34010100 MOORHOUSE														
24	24.4	0.98	0.1	2	12 0.95	5 1.22	*0 0.7	1 1.55	3 1.43	1 1.12	*0 1.1	1 1.05	1 2.02	*0 0.8
50	54.2	0.92	1.9	5	12 0.98	8 0.94	6 1.31	2 1.03	5 0.91	5 1.14	2 0.52	4 0.98	3 0.70	3 0.62
34030100 CAULDRON SNOOT														
22	25.0	0.88	0.6	2	12 0.95	3 0.73	1 1.39	1 1.50	3 1.40	*0 1.7	*0 0.3	2 1.82	*0 0.7	*0 0.8
39	55.6	0.70	7.6	5	11 0.90	8 0.86	1 0.26	2 1.47	4 0.60	3 0.69	1 0.20	1 0.32	2 0.42	6 1.22
34050100 DENT BANK														
20	25.8	0.77	2.4	2	11 0.94	2 1.18	2 0.53	1 0.52	1 0.63	3 1.14	*0 0.0	*0 1.5	*0 0.2	*0 0.7
45	57.2	0.79	8.9	6	11 1.06	9 1.04	6 1.12	6 1.01	4 1.04	3 0.54	1 0.28	3 0.81	1 0.20	1 0.19
34070100 BARNARD CASTLE														
20	27.9	0.72	4.4	2	12 1.03	2 0.79	1 0.34	1 0.38	2 0.60	*0 2.2	*0 1.1	*0 0.0	1 1.36	1 1.39
57	62.4	0.91	2.7	6	13 1.05	11 1.18	8 1.04	3 0.79	5 0.82	3 0.56	3 1.13	3 0.54	5 1.35	3 0.51
34090100 GAINFORD														
25	29.4	0.85	1.4	2	12 0.95	2 0.77	3 1.36	4 0.78	2 0.71	*0 1.0	1 1.43	*0 0.8	1 1.43	*0 0.9
65	67.1	0.97	4.5	7	12 0.90	9 0.88	10 1.34	8 1.13	5 1.29	3 0.85	4 0.94	7 1.25	5 0.85	2 0.35
34130100 OVER DINSDALE														
25	34.0	0.73	5.3	2	15 0.87	3 0.87	5 1.11	1 0.49	*0 2.2	*0 1.8	*0 0.7	1 0.79	*0 0.5	*0 0.1
64	78.5	0.82	6.7	6	13 1.05	13 0.89	11 1.03	7 0.98	4 0.92	3 0.41	3 0.55	2 0.41	7 1.01	1 0.21
35010100 DIPPER BRIDGE														
22	23.2	0.95	0.5	1	13 0.96	4 1.20	1 1.41	*0 0.0	2 1.19	1 0.55	1 2.74	*0 0.3	*0 1.0	*0 0.5
45	51.4	0.88	4.2	5	13 1.05	9 1.18	5 0.92	4 1.56	4 1.18	1 0.22	*0 3.8	4 0.98	4 1.08	1 0.26
35030100 ALSTON														
20	23.8	0.84	2.4	2	13 1.03	4 1.20	1 0.67	*0 0.6	*0 1.6	1 0.74	*0 0.7	*0 0.9	1 2.41	*0 0.7
45	52.8	0.85	3.6	5	13 1.05	9 1.17	5 0.93	2 0.78	2 0.41	3 0.85	2 0.52	3 0.65	4 1.17	2 0.44
35050100 D/S KNARSDALE														
21	24.4	0.86	3.6	2	12 0.95	1 1.17	4 1.28	2 1.47	1 0.47	*0 0.9	1 0.93	*0 1.1	*0 0.5	*0 0.8
45	54.1	0.83	4.9	5	13 1.06	7 0.91	6 1.00	1 1.51	7 1.07	2 0.51	3 0.68	3 0.87	2 0.46	1 0.21
35070100 FEATHERSTONE														
20	24.3	0.82	2.1	2	13 1.03	1 1.17	2 0.64	1 0.74	1 0.47	1 1.13	1 0.95	*0 1.0	*0 0.5	*0 0.8
44	54.0	0.82	6.0	5	13 1.06	7 0.91	6 1.00	1 1.52	4 0.61	2 0.52	4 1.06	4 0.99	2 0.46	1 0.21
35090100 BARDON MILL														
27	27.6	0.98	1.7	2	13 1.03	2 1.17	2 1.35	5 1.32	1 0.26	2 1.05	*0 0.4	*0 0.5	1 1.36	1 1.52
55	62.1	0.89	2.8	7	13 1.05	7 0.90	9 1.20	4 0.77	7 0.91	1 0.37	2 0.54	4 0.85	3 0.59	5 0.95

CLASSIFICATION METHOD : TWINSPAN ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
35110100 WARDEN BRIDGE														
27	29.7	0.91	0.5	2	12	1.03	3	0.87	4	0.92	3	0.67	3	1.88
68	67.6	1.01	2.4	8	12	1.05	11	0.98	10	1.24	6	1.03	6	1.20
35130100 CORBRIDGE														
30	29.7	1.01	1.6	3	13	1.03	3	1.19	3	1.00	7	1.34	3	1.83
70	67.8	1.03	3.5	7	16	1.06	10	1.18	7	1.05	10	1.51	4	0.79
35150100 WYLAM														
26	31.0	0.84	3.6	2	13	0.97	2	0.80	5	0.95	3	1.12	2	1.17
63	71.3	0.88	5.9	8	15	1.06	9	1.04	6	0.67	8	1.12	2	0.69
36010100 KIRKWHELPINGTO														
31	27.5	1.13	6.4	2 *	13	0.95	1	0.61	2	0.65	*0	1.3	2	1.74
79	62.3	1.27	13.2	7	11	1.06	3	1.19	6	1.00	6	0.91	8	1.30
36030100 MIDDLETON														
31	30.1	1.03	2.3	2	14	1.03	2	1.14	4	0.76	*0	1.2	2	0.89
84	69.3	1.21	9.9	8	12	1.06	5	0.98	5	0.75	10	1.28	5	0.89
36050100 MELDON														
30	30.4	0.99	0.3	2	14	1.03	3	1.18	2	0.55	6	1.03	*0	0.5
72	69.6	1.03	6.0	8	16	1.06	11	1.17	6	0.90	6	0.93	3	0.54
36070100 MITFORD GAUGIN														
34	31.2	1.09	0.5	2	14	1.03	4	0.96	4	1.05	5	1.27	2	1.15
87	71.5	1.22	10.6	7	15	1.06	12	1.07	5	0.95	9	1.15	7	1.57
36090100 BOTHAL														
30	31.9	0.94	0.4	2	17	1.04	1	0.59	5	0.95	3	0.92	*0	1.7
73	73.3	1.00	1.3	7	13	1.05	16	1.09	5	1.09	6	1.16	7	0.84
37010100 TEITH BRIDGE,														
35	26.7	1.31	5.1	2	12	1.02	3	1.19	4	1.32	5	1.50	1	0.84
87	59.0	1.47	33.8	6 ***	11	1.04	13	1.17	8	1.32	9	1.39	6	1.36
37030100 LAIGHLANDS														
26	26.5	0.98	0.1	2	12	1.03	2	1.19	3	0.79	3	1.14	2	0.90
63	58.7	1.07	1.9	6	9	0.94	10	1.06	9	1.08	5	0.88	3	0.77
37050100 BRIDGE OF TEIT														
28	26.9	1.04	0.1	2	12	1.02	3	1.19	4	0.91	3	1.19	3	1.85
65	59.3	1.10	5.8	6	12	1.05	10	1.07	8	1.16	5	0.77	7	1.56
37090100 ABERFOYLE BRID														
33	25.5	1.29	5.2	2	11	1.03	3	1.13	2	0.87	1	0.79	3	1.85
69	58.3	1.18	9.2	6	8	1.08	8	1.03	3	0.65	6	1.16	8	1.61
37110100 PARKS OF GARDE														
39	32.3	1.21	2.8	3	11	0.95	6	1.19	8	1.35	4	1.56	2	0.89
102	74.6	1.37	23.9	8 **	9	0.87	10	0.97	13	1.14	9	1.16	6	1.88
37130100 KIPPEN BRIDGE														
32	33.8	0.95	0.9	3	15	1.04	5	0.73	3	0.83	4	1.54	2	1.16
73	78.1	0.93	4.2	9	12	0.98	12	0.83	8	0.81	5	0.95	4	0.61
37150100 GARGUNNOCK BRI														
33	34.2	0.97	0.8	2	17	0.98	4	0.93	5	1.13	2	1.49	1	0.44
74	78.9	0.94	0.7	6	11	0.89	16	0.94	9	1.09	9	1.37	2	0.40
37170100 DRIP BRIDGE														
38	34.3	1.11	0.9	2	18	0.99	4	1.18	6	1.16	1	1.54	3	1.33
94	79.0	1.19	21.1	7 **	12	1.05	18	0.96	8	1.07	9	1.25	4	0.82
38010100 CRICHTON														
29	29.0	1.00	0.2	2	15	1.03	3	1.19	2	0.88	*0	1.3	3	1.35
61	67.6	0.90	7.1	9	8	1.05	7	1.00	6	1.13	6	0.76	6	0.89
38030100 ORMISTON														
26	31.2	0.83	1.8	2	13	1.02	3	0.88	3	0.57	2	1.03	2	0.90
67	72.6	0.92	5.2	8	13	1.06	7	1.03	6	0.87	12	1.23	4	0.74
38050100 EASTER PENCAIT														
31	31.7	0.98	0.2	2	14	1.03	5	1.00	5	1.34	2	0.59	2	1.16
72	72.9	0.99	4.2	7	14	1.05	13	1.08	6	1.14	9	1.06	3	0.67
38070100 HADDINGTON WEI														
27	31.6	0.86	1.6	2	14	1.02	4	0.94	4	0.88	2	0.51	*0	1.2
70	72.2	0.97	2.1	7	15	1.05	14	1.09	4	1.07	8	1.02	7	1.16

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI	SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
38090100 EAST LINTON												
29 31.7 0.91	1.1 2		15 1.03	3 0.87	5 1.09	6 1.32	*0 1.1	*0 0.0	*0 0.3	*0 1.9	*0 0.8	*0 0.4
67 72.5 0.92	2.4 8		15 1.05	13 1.07	5 0.83	3 0.51	7 0.86	5 0.95	2 0.71	7 1.12	5 0.78	5 0.91
39030100 BRAEMAR												
22 26.4 0.82	1.2 2		12 1.02	1 0.40	2 0.45	2 1.03	2 0.91	1 0.77	*0 0.3	1 0.82	*0 0.4	1 1.59
48 58.6 0.82	5.5 7		11 0.96	9 0.88	3 0.50	7 1.18	5 0.98	1 0.38	6 1.30	1 0.24	2 0.58	3 0.59
39050100 BALMORAL												
23 26.4 0.87	0.6 2		10 0.85	2 0.80	1 0.33	4 1.21	3 1.80	3 1.68	*0 0.3	*0 1.0	*0 0.6	*0 0.6
50 58.0 0.86	6.7 6		12 1.05	8 0.94	6 0.87	8 1.12	5 1.13	4 1.51	2 0.51	1 0.22	2 0.57	2 0.41
39070100 D/S BALLATER												
22 26.6 0.83	1.6 2		12 1.02	1 0.40	3 0.81	3 1.14	2 1.18	*0 1.8	*0 0.3	1 1.03	*0 0.6	*0 0.6
36 58.3 0.62	14.5 6 *		11 0.96	6 0.64	3 0.49	8 1.11	3 0.67	1 0.38	*0 4.0	3 0.70	1 0.26	*0 4.9
39090100 D/S ABOYNE												
34 26.6 1.28	6.0 2 *		12 1.02	3 1.19	4 0.91	3 1.54	3 1.77	3 1.67	1 3.20	3 2.54	1 2.37	1 1.64
79 58.4 1.35	12.0 6		12 1.05	11 1.08	7 1.16	9 1.38	7 1.56	4 1.52	6 1.51	10 2.13	5 1.43	8 1.63
39110100 POTARCH BRIDGE												
26 26.8 0.97	0.3 2		12 1.02	2 0.79	5 1.14	2 1.03	2 0.90	2 1.53	*0 0.3	1 0.80	*0 0.5	*0 0.5
52 58.8 0.88	5.6 7		11 0.96	6 0.59	3 0.49	7 1.18	3 0.59	5 1.66	5 1.18	4 0.95	4 1.13	4 0.79
39130100 D/S BANCHORY												
27 26.7 1.01	0.1 2		12 1.02	2 0.79	4 0.91	2 1.04	2 0.90	1 0.77	1 3.06	3 2.36	*0 0.5	*0 0.5
67 58.7 1.14	6.2 7		12 1.05	11 1.08	7 1.15	7 1.18	6 1.18	5 1.66	7 1.66	7 1.67	3 0.85	2 0.40
39150100 CULTS												
22 27.3 0.81	1.6 2		10 0.93	3 0.88	2 0.68	1 0.38	1 0.37	3 1.69	2 1.34	*0 0.3	*0 0.6	*0 0.7
52 60.6 0.86	7.7 6		11 0.96	8 0.73	9 1.32	2 0.77	7 0.97	5 1.43	4 1.03	3 0.60	3 0.82	*0 5.5
40030100 LAGGAN BRIDGE												
28 26.2 1.07	0.4 2		12 1.03	1 0.59	5 1.11	2 1.54	2 1.15	3 1.28	2 2.16	*0 0.7	*0 0.8	1 1.85
61 58.3 1.05	2.7 7		11 1.06	8 0.86	5 0.95	6 0.92	8 1.48	4 0.98	3 1.74	7 1.26	5 1.13	4 0.72
40050100 NEWTONMORE												
24 26.1 0.92	0.6 2		12 1.02	2 1.19	3 0.79	2 0.76	3 1.79	2 1.09	*0 0.7	*0 0.7	*0 0.9	*0 0.5
58 57.7 1.01	4.1 6		10 1.05	11 1.16	9 1.19	7 1.20	7 1.43	4 1.10	2 0.55	3 0.78	3 0.72	2 0.40
40090100 BOAT OF GARTEN												
32 26.7 1.20	1.7 2		12 1.02	3 1.19	6 1.35	3 1.53	4 1.80	2 1.53	*0 0.3	1 1.03	*0 0.6	1 1.63
86 58.6 1.47	21.6 6 **		12 1.05	11 1.07	8 1.32	9 1.51	9 1.76	5 1.46	6 1.71	7 1.74	10 2.62	9 1.81
40110100 GRANTOWN												
28 26.7 1.05	0.2 2		12 1.02	3 1.19	4 0.90	2 1.02	4 1.80	2 1.53	1 3.15	*0 1.0	*0 0.6	*0 0.6
59 58.6 1.01	5.4 6		12 1.05	11 1.07	6 0.99	8 1.34	6 1.17	3 0.87	4 1.14	6 1.49	1 0.26	2 0.40
40130100 MARYPARK												
27 26.7 1.01	0.6 2		12 1.02	2 0.79	6 1.36	2 1.02	3 1.35	*0 1.3	*0 0.3	1 0.84	*0 0.4	1 1.62
66 58.6 1.13	3.9 6		11 0.96	12 1.17	6 0.99	6 1.01	4 0.78	3 0.99	7 1.79	6 1.35	4 1.17	7 1.40
40170100 GARMOUTH												
26 27.0 0.96	1.2 2		12 1.03	2 1.16	6 1.16	1 1.44	3 0.88	1 0.77	1 0.95	*0 0.8	*0 0.5	*0 0.6
59 59.7 0.99	3.5 6		12 1.05	14 1.19	6 1.14	5 1.26	6 0.96	3 0.85	5 1.28	2 0.39	4 1.25	2 0.38
41010100 HIGHBRIDGE												
24 23.0 1.04	0.3 2		10 0.94	2 0.75	3 1.39	2 1.57	1 0.97	*0 0.9	3 2.64	2 1.18	*0 0.4	1 0.98
52 53.0 0.98	3.6 6		8 0.96	6 1.16	7 1.32	4 1.24	8 1.50	3 0.86	6 0.93	6 1.00	1 0.23	3 0.55
41030100 D/S DALQUHAIRN												
27 27.9 0.97	0.2 2		13 1.03	1 1.22	4 1.34	3 0.66	2 0.93	2 0.90	1 2.66	*0 0.5	1 0.98	*0 0.6
61 63.4 0.96	4.1 7		14 1.06	8 1.05	4 0.77	7 1.21	8 1.19	5 0.99	2 0.61	6 1.09	5 1.10	2 0.32
41050100 D/S BARR												
25 29.1 0.86	1.5 2		13 1.03	2 1.19	1 0.45	3 0.51	4 1.22	1 2.06	*0 0.4	*0 0.8	1 0.99	*0 0.7
41 66.7 0.61	15.0 8		13 0.97	7 0.82	3 0.40	6 0.79	5 0.85	*0 2.2	1 0.19	2 0.38	3 0.59	1 0.16
41070100 PINMORE BRIDGE												
24 30.2 0.79	2.2 3		12 0.95	2 0.75	3 1.02	4 0.61	1 0.48	*0 0.4	*0 0.3	*0 1.0	1 1.35	1 1.19
46 70.2 0.66	13.2 7		14 0.98	8 0.84	8 0.90	4 0.69	1 0.22	4 0.89	1 0.21	2 0.39	3 0.46	1 0.16
41090100 D/S COLMONELL												
30 30.6 0.98	1.9 2		12 0.95	3 1.14	6 1.16	6 1.33	1 0.64	2 2.19	*0 0.7	*0 1.0	*0 1.0	*0 0.6
54 71.8 0.75	9.6 7		16 0.99	5 0.72	9 0.86	3 0.51	4 0.90	4 0.98	5 1.09	5 0.74	2 0.33	1 0.15
41110100 BALLANTRAE												
28 34.7 0.81	6.5 3		14 0.97	10 1.18	3 0.66	*0 1.3	1 1.78	*0 1.4	*0 1.3	*0 1.3	*0 0.7	*0 0.6
58 86.3 0.67	18.6 9 *		18 1.06	9 0.82	8 0.76	6 1.00	3 0.43	1 0.16	3 0.49	6 0.76	4 0.56	*0 7.3

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
42010100 ABOVE ERICSTAN														
22	24.7	0.89	3.6	2	13	1.03	2 0.77	1 1.33	2 1.53	3 1.33	*0 2.2	*0 0.4	*0 0.5	1 0.70
56	55.4	1.01	11.8	7	9	0.97	6 1.00	5 0.96	5 1.26	8 1.85	6 1.11	8 1.78	7 1.15	2 0.40
42030100 MOFFAT														
24	23.4	1.03	0.2	2	13	1.03	4 0.96	*0 0.7	1 1.64	2 1.85	3 1.64	*0 0.4	*0 0.5	1 1.29
50	51.9	0.96	2.6	5	12	1.05	8 0.93	7 1.30	2 0.78	4 1.19	5 1.10	5 1.31	3 0.78	3 0.68
42050100 NEWTON BRIDGE														
26	26.6	0.98	0.4	2	13	1.03	1 1.18	2 0.90	4 1.23	3 1.10	*0 1.4	2 0.97	1 4.22	*0 0.5
63	59.6	1.06	3.6	6	12	1.06	10 1.17	4 1.04	6 1.15	8 1.22	6 1.19	6 1.59	4 0.86	4 0.91
42070100 MILLHOUSE BRID														
26	27.8	0.94	0.4	2	12	1.03	3 1.16	*0 1.5	4 1.22	5 1.01	*0 1.4	1 1.44	1 3.48	*0 0.8
62	62.5	0.99	11.6	7	12	0.97	10 1.17	8 0.98	4 1.21	8 0.97	4 1.76	8 2.07	5 1.00	2 0.39
42090100 WILLIAMWATH BR														
29	29.0	1.00	0.7	2	13	1.03	2 1.17	3 1.00	5 1.31	4 1.01	*0 1.0	1 0.98	*0 0.3	*0 0.9
62	66.0	0.94	2.3	6	13	1.05	9 0.95	9 0.93	6 1.20	5 1.12	3 0.83	6 1.24	1 0.23	7 1.14
42110100 BRYDEKIRK														
27	28.9	0.94	0.4	2	13	1.03	1 0.58	3 1.00	4 1.04	2 0.58	2 1.41	1 1.48	1 1.79	*0 0.8
62	65.5	0.95	4.0	7	12	1.04	12 1.16	7 0.78	6 1.17	8 1.75	3 0.73	3 0.63	4 0.88	4 0.71
43010100 ALLT COIRE CRU														
18	22.7	0.79	2.2	2	11	1.03	2 0.76	*0 1.4	1 0.50	*0 0.0	1 0.52	1 0.92	1 0.86	*0 0.8
46	52.5	0.88	3.2	6	9	1.07	4 0.77	4 0.76	1 0.31	5 1.16	3 0.72	6 0.84	7 1.28	4 1.00
43030100 ACHNASHELLACH														
25	24.8	1.01	0.3	2	12	1.03	3 1.16	2 0.70	*0 0.0	*0 0.5	4 1.71	2 0.85	1 0.87	*0 0.9
66	58.1	1.14	4.9	6	10	1.07	8 1.18	5 1.10	4 1.27	6 1.37	8 1.29	4 0.55	8 1.53	6 1.31
43050100 FIONN-ABHAINN														
18	23.5	0.77	2.5	2	11	0.95	*0 1.8	1 0.46	1 0.73	*0 0.0	1 0.51	1 0.70	3 2.39	*0 1.3
48	54.6	0.88	2.7	6	9	0.97	6 1.01	4 1.05	1 0.31	4 1.02	6 0.96	5 0.72	5 0.91	1 0.26
43070100 D/S LOCH DAMHA														
30	24.4	1.23	2.7	2	12	1.03	2 1.12	4 1.11	*0 0.0	1 2.00	4 1.74	2 1.46	2 1.35	2 1.83
82	56.9	1.44	16.8	6 *	10	1.07	8 1.18	6 1.33	3 1.20	4 1.04	9 1.35	11 1.65	10 1.66	9 2.04
43090100 CRAIG														
20	26.8	0.75	3.4	2	11	0.94	3 0.86	2 0.68	2 1.54	*0 1.1	*0 2.6	1 0.72	*0 0.7	*0 1.0
54	62.9	0.86	3.9	6	13	1.06	7 0.83	2 0.69	8 1.11	3 0.61	4 0.76	6 1.47	5 0.78	2 0.36
43110100 BALNACRA														
30	24.6	1.22	4.0	2	11	0.95	3 1.16	4 1.39	*0 0.6	*0 0.0	2 0.87	3 2.02	3 1.94	1 1.35
80	57.3	1.40	37.0	6 ***	11	1.07	7 0.93	4 1.35	6 1.17	6 1.39	4 0.83	9 1.32	5 1.10	6 1.43
43130100 NEW KELSO														
23	28.7	0.80	3.9	2	14	1.03	3 0.86	4 1.07	*0 0.6	1 0.37	*0 0.9	*0 0.8	1 0.54	*0 0.6
55	67.7	0.81	9.6	7	17	1.04	6 0.79	6 1.13	8 1.24	5 1.13	2 0.37	2 0.38	5 0.82	3 0.46
44010100 GLENBAIN														
25	27.2	0.92	1.2	2	11	0.94	5 1.16	4 1.04	1 1.59	1 0.86	1 1.12	2 0.83	*0 0.5	*0 1.1
52	63.6	0.82	5.7	6	13	0.97	7 0.83	7 1.02	7 1.06	4 1.02	3 0.95	4 0.80	2 0.38	2 0.41
44030100 D/S LOCH AWE														
31	28.8	1.07	0.4	2	14	1.03	4 1.17	4 1.40	2 1.03	4 1.48	*0 0.4	2 1.21	*0 1.3	1 1.80
78	68.5	1.14	7.8	7	17	1.06	8 1.17	6 1.36	6 1.32	10 1.30	11 1.79	6 1.23	5 0.76	7 1.16
44050100 INCHNADAMPH														
27	30.0	0.90	0.9	2	15	1.03	4 0.96	1 0.65	3 0.76	1 0.94	*0 0.5	2 0.85	1 1.32	*0 0.6
81	71.5	1.13	5.6	7	21	1.05	3 0.59	4 1.05	8 1.03	7 1.29	6 1.11	7 0.97	11 1.67	4 0.89
44070100 LITTLE ASSYNT														
37	29.9	1.24	3.8	2	15	1.03	5 1.20	2 1.30	5 1.26	1 0.94	*0 0.5	4 1.94	2 1.90	3 5.10
88	71.3	1.23	6.3	8	21	1.05	6 1.19	6 1.15	8 1.26	7 1.29	7 1.13	7 1.28	9 1.21	10 2.25
44090100 LOCHINVER														
21	27.4	0.77	3.1	2	10	0.85	4 0.59	*0 2.2	*0 0.0	*0 1.7	*0 0.0	4 1.44	1 1.31	1 1.10
42	63.9	0.66	9.2	6	12	0.77	8 0.73	3 0.50	6 1.04	*0 3.8	*0 2.2	3 0.96	6 0.94	2 0.31
46010100 U/S DURNES														
25	28.3	0.88	1.3	2	13	1.04	1 1.17	1 0.34	4 1.23	3 0.92	1 0.73	1 0.99	*0 1.0	*0 1.8
62	66.4	0.93	6.4	9	9	1.07	7 1.17	4 0.77	6 1.03	6 0.85	4 0.64	7 1.06	8 1.22	2 0.27
47010100 FORSINARD LODG														
21	23.2	0.91	1.9	2	11	1.03	3 1.13	1 0.69	3 1.46	*0 0.0	1 0.52	*0 1.4	2 2.00	*0 1.3
57	53.8	1.06	2.9	6	8	1.07	9 1.16	5 1.33	4 1.23	5 1.29	6 1.11	7 0.87	7 1.49	3 0.80

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
47030100 FORSINAIN											
28 25.7 1.09	0.3 2	13 1.04	3 1.17	4 1.33	2 1.57	*0 1.1	2 2.08	2 1.12	1 0.90	1 1.35	*0 0.6
62 59.7 1.04	4.3 6	13 1.06	3 0.59	10 1.18	10 1.41	4 1.06	7 1.72	3 0.88	6 1.09	3 0.69	3 0.53
47050100 MILLBURN											
25 27.5 0.91	2.1 2	12 1.02	8 1.18	2 0.91	*0 0.0	2 1.18	*0 0.4	1 0.41	*0 0.8	*0 0.9	*0 0.4
66 64.2 1.03	8.5 6	15 1.03	12 1.18	7 1.15	8 1.23	6 1.38	3 1.41	6 1.90	5 0.74	2 0.33	2 0.45
47070100 GOLVAL											
29 28.3 1.03	0.3 2	12 0.95	5 0.97	4 1.35	*0 0.0	1 0.59	2 0.87	2 2.65	3 1.90	*0 0.6	*0 0.5
64 66.5 0.96	3.1 7	15 0.97	9 0.97	7 1.18	7 1.54	4 0.80	2 0.55	6 0.99	4 0.74	6 1.14	4 0.67
48010100 U/S LOCH RANGA											
26 23.1 1.13	0.6 2	11 1.03	3 1.12	3 1.38	2 1.54	*0 0.5	1 0.70	1 0.90	3 1.97	1 1.29	1 1.10
53 53.3 1.00	5.3 7	10 1.08	4 0.78	7 1.34	4 1.26	2 0.61	5 0.93	3 0.45	9 1.73	5 1.12	4 0.74
48030100 TACHER											
30 28.0 1.07	0.5 3	12 1.02	5 0.96	4 1.32	1 1.45	2 1.21	2 0.91	1 0.73	2 2.12	1 1.65	*0 0.6
69 65.7 1.05	5.6 7	16 1.05	8 1.06	7 1.16	8 1.51	7 1.27	5 1.56	6 1.02	6 0.99	4 0.82	2 0.33
48050100 WESTERDALE											
28 27.3 1.03	0.0 2	12 1.02	7 1.03	2 0.91	*0 0.0	3 1.77	*0 0.0	3 1.08	1 1.32	*0 0.9	*0 0.4
55 63.8 0.86	7.8 6	15 1.03	13 1.19	6 1.00	6 0.93	5 1.31	1 0.57	1 0.28	5 0.75	3 0.47	*0 3.7
48070100 SORDALE											
32 27.8 1.15	2.0 2	11 0.93	7 1.02	3 1.36	*0 0.0	3 1.78	1 2.17	4 1.55	2 1.98	*0 0.8	1 2.31
54 65.1 0.83	9.2 6	15 1.03	10 1.06	7 0.92	6 1.15	5 1.02	*0 2.6	1 0.23	6 0.98	2 0.30	2 0.55
49010100 FINGLAND											
23 23.2 0.99	0.1 1	13 0.96	4 1.21	1 1.42	*0 0.6	2 1.86	1 0.55	*0 0.4	*0 0.5	*0 0.7	2 3.54
53 51.3 1.03	2.6 5	12 1.04	10 1.17	6 1.11	5 1.33	3 1.38	5 1.11	5 1.33	3 0.74	1 0.25	3 0.82
49030100 NETHER RIGS											
21 23.3 0.90	0.9 2	13 1.03	4 0.95	1 1.42	*0 0.6	2 1.85	1 0.55	*0 0.4	*0 0.5	*0 0.6	*0 0.7
44 51.6 0.85	3.2 5	13 1.05	8 1.04	5 0.92	3 0.94	3 1.08	3 0.66	3 0.79	1 0.26	3 0.69	2 0.55
49050100 KINGLEDORES											
24 24.0 1.00	0.2 2	13 1.03	4 1.21	2 1.33	*0 0.6	1 0.63	2 1.45	1 1.00	1 1.14	*0 0.3	*0 0.8
56 53.1 1.05	3.5 5	13 1.05	9 1.17	7 1.30	1 0.39	5 1.03	7 2.23	6 1.50	3 0.60	2 0.58	3 0.63
49070100 CROWNHEAD BRID											
31 28.5 1.09	0.6 2	11 0.94	3 1.16	2 1.34	5 1.27	6 1.08	*0 0.5	*0 0.3	2 1.91	*0 0.8	2 3.26
73 64.6 1.13	7.0 7	12 0.97	9 1.06	7 1.05	2 0.38	8 1.29	5 1.11	3 0.68	8 1.74	9 1.43	10 1.69
49090100 PEEBLES GAUGE											
35 26.7 1.31	4.7 2	13 1.03	1 1.19	2 1.32	6 1.51	5 1.53	1 1.10	2 0.90	1 3.52	1 2.67	3 4.12
66 59.5 1.11	1.3 6	13 1.06	8 1.04	8 1.19	4 0.89	8 1.22	7 1.76	2 0.56	8 1.72	3 0.74	5 0.92
49110100 OLD TWEED BRID											
33 27.9 1.18	1.8 2	12 1.03	3 1.15	4 1.37	2 0.80	5 1.28	3 1.60	1 0.99	*0 0.0	1 1.30	2 3.03
72 62.9 1.15	11.7 6	12 0.97	9 1.05	11 1.12	2 0.77	5 0.68	3 1.08	4 0.83	8 1.84	6 1.25	12 2.24
49130100 DRY GRANGE BRI											
25 27.7 0.90	2.2 2	12 1.03	2 1.14	4 1.30	3 0.95	2 0.60	1 0.37	*0 0.7	*0 0.0	*0 0.7	1 1.59
55 62.1 0.89	2.5 6	11 0.96	12 1.18	8 1.04	2 0.61	6 0.77	1 0.37	3 0.77	3 0.60	4 0.93	5 0.88
49150100 D/S BIRGHAM											
36 32.6 1.10	1.4 3	14 1.03	7 1.17	6 1.38	3 1.50	3 1.08	*0 0.0	2 1.19	1 1.01	*0 0.9	*0 0.3
79 75.0 1.05	4.5 6	15 1.06	15 1.19	10 1.24	5 1.12	12 1.46	2 0.75	8 1.21	4 0.81	3 0.43	5 0.79
49170100 CANNY ISLAND											
36 35.1 1.02	0.6 3	14 1.03	5 1.17	8 1.19	1 1.50	3 0.68	2 1.10	2 0.80	*0 0.0	1 2.32	*0 0.8
88 82.7 1.06	5.4 9	9 1.06	13 1.01	9 1.20	10 1.11	6 0.63	6 0.72	6 1.15	14 1.47	7 1.40	8 1.08
50010100 FAIRHOUSE FARM											
35 30.0 1.17	2.4 2	15 1.04	4 1.15	3 1.38	2 1.52	5 1.83	*0 1.4	3 2.07	1 0.51	*0 0.3	2 2.94
80 70.4 1.14	9.8 8	9 1.05	8 1.05	4 0.90	7 0.98	13 1.56	8 1.40	13 1.56	9 1.46	6 0.80	3 0.45
50030100 BIDWELL FARM											
34 33.7 1.01	1.1 3	16 1.03	5 1.00	3 1.35	5 1.27	1 0.45	*0 1.3	1 1.41	2 1.83	1 1.00	*0 0.7
88 83.0 1.06	6.4 9	13 1.05	13 1.08	8 0.98	13 1.32	5 0.99	9 1.22	8 1.12	6 0.92	11 1.43	2 0.29
50050100 MONKTON											
37 35.2 1.05	1.1 3	14 1.03	9 1.06	8 1.37	*0 0.0	4 1.45	*0 0.9	2 1.54	*0 0.9	*0 0.6	*0 0.7
82 88.2 0.93	9.8 9	13 1.05	11 0.92	14 1.11	10 1.55	7 0.90	9 1.39	6 0.73	6 0.81	2 0.26	4 0.54
50070100 COLHAYES FARM											
36 33.9 1.06	0.6 3	13 0.95	6 1.01	6 0.99	3 1.53	2 1.22	2 2.09	1 0.77	3 3.07	*0 0.9	*0 0.5
84 83.4 1.01	9.8 9	14 1.05	12 0.93	6 0.67	6 0.70	8 1.59	5 0.80	6 0.89	8 1.19	7 0.82	12 1.92

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
50090100 NEWTON POPPLEF														
39	34.6	1.13	3.3	2	16	1.04	5	1.17	7	0.94	2	1.02	*0	0.5
101	84.7	1.19	11.8	9	15	1.06	15	1.19	10	1.21	7	0.99	4	0.53
51010100 CHANTMARLE														
36	31.5	1.14	2.5	3	10	1.02	5	1.15	4	1.34	8	1.54	5	1.33
88	75.6	1.16	9.1	8	6	1.03	8	1.03	12	1.34	9	1.07	7	1.63
51030100 FRAMPTON														
37	35.8	1.03	1.3	4	14	1.03	4	0.78	7	1.30	5	1.10	2	1.81
87	87.7	0.99	8.8	9	12	1.06	12	1.17	11	1.15	8	0.87	8	1.12
51050100 LOWER BOCKHAMPTON														
38	37.0	1.03	0.0	3	15	1.02	8	1.04	3	1.00	6	1.04	1	0.83
85	90.3	0.94	12.0	9	12	0.98	16	1.11	9	1.02	9	1.15	13	1.27
51070100 MORETON														
43	39.4	1.09	0.6	2	23	1.03	6	1.15	6	1.35	2	0.77	2	1.21
106	96.5	1.10	5.6	7	22	1.05	15	0.97	16	1.12	7	0.96	3	0.61
51090100 EAST STROKE														
40	39.5	1.01	0.0	2	21	1.02	6	0.86	5	1.13	3	0.93	2	1.81
104	96.7	1.08	3.5	8	17	0.98	19	0.96	14	1.11	8	0.94	7	1.44
52010100 WOOKEY HOLE														
24	29.1	0.82	1.7	2	12	1.02	6	0.80	*0	0.8	3	0.89	*0	0.6
48	69.1	0.69	10.2	6	10	0.95	9	0.90	2	0.67	5	0.58	6	1.09
52030100 BLEADNEY														
30	33.0	0.91	1.4	3	14	1.02	4	1.17	4	0.86	3	1.50	2	0.60
65	81.7	0.80	7.7	9	14	1.05	7	1.02	7	1.02	6	0.83	7	0.78
52070100 LOWER WEARE														
26	31.6	0.82	2.9	2	20	1.01	*0	0.8	2	0.65	*0	0.7	1	0.92
75	87.5	0.86	5.2	8	18	1.04	9	0.81	8	1.05	9	1.18	7	0.72
53010100 MILL LAWN														
37	33.0	1.12	2.5	3	12	1.04	3	1.16	7	1.03	9	1.49	2	1.97
89	75.3	1.18	7.9	8	8	0.92	7	1.17	9	1.22	10	1.08	11	1.62
53030100 PUTTLES BRIDGE														
42	33.1	1.27	4.2	3	12	1.04	5	1.19	7	1.34	7	1.17	2	1.95
93	75.7	1.23	8.2	9	7	1.03	6	0.78	9	1.21	10	0.96	9	1.47
53050100 MILLYFORD BRID														
34	33.0	1.03	0.8	4	11	1.04	5	0.98	7	1.34	5	0.84	1	0.98
62	75.4	0.82	7.8	9	4	0.68	9	1.04	7	0.94	9	0.92	6	0.90
53070100 BALMER LAWN														
40	33.1	1.21	2.1	3	13	1.05	4	1.21	6	1.14	8	1.35	2	1.90
91	76.2	1.19	12.6	9	6	1.03	9	1.05	10	1.34	11	1.13	10	1.48
53090100 BOLDRE BRIDGE														
39	36.5	1.07	0.3	2	13	1.03	4	0.94	10	1.02	5	1.57	3	1.05
98	86.8	1.13	9.3	9	10	0.90	11	0.81	6	0.90	6	0.91	9	1.10
54010100 HADMAN'S PLACE														
29	31.6	0.92	1.5	3	13	1.03	5	0.98	2	0.53	1	0.53	1	0.61
87	78.7	1.11	4.2	8	8	0.94	13	1.09	10	1.03	5	1.27	4	0.74
54030100 SLANEY PLACE														
28	32.1	0.87	1.7	3	13	1.02	5	0.97	3	0.79	1	0.39	*0	1.1
89	79.8	1.11	4.2	8	10	1.05	11	1.00	11	1.12	3	0.66	4	0.82
54050100 STILE BRIDGE														
28	31.7	0.88	1.9	2	15	1.03	6	1.19	*0	0.8	2	0.99	3	0.69
77	79.5	0.97	3.7	8	9	0.95	17	1.11	10	1.22	3	1.15	4	0.68
54070100 HUNTON														
35	31.8	1.10	1.5	2	15	1.03	3	0.88	4	1.04	2	1.59	2	0.72
101	79.3	1.27	10.6	8	11	1.05	13	1.02	11	1.22	3	0.93	7	1.09
55010100 STONEBRIDGE GR														
25	31.7	0.79	2.8	3	14	0.96	4	0.80	1	0.45	*0	0.6	4	1.04
58	79.1	0.73	8.2	8	13	0.99	10	0.85	5	0.61	4	1.25	3	0.44
55030100 LITTLE CHART F														
34	32.1	1.06	1.7	2	14	1.03	9	1.20	2	1.39	1	0.77	4	1.79
81	79.2	1.02	7.3	8	11	1.05	13	1.17	9	1.01	6	1.33	10	1.22

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
55050100 WYE											
30 33.3 0.90	0.8 2	15 0.86	6 1.18	2 0.89	2 1.03	3 1.83	*0 1.4	*0 0.7	*0 1.0	1 0.75	1 2.11
74 82.0 0.90	2.8 8	16 1.05	11 0.86	5 0.68	7 1.18	4 0.81	6 0.63	6 1.15	7 0.91	6 0.81	6 1.01
55070100 MILTON BRIDGE											
35 33.8 1.03	2.8 3	17 0.97	7 1.18	2 1.34	3 1.52	3 1.80	1 0.55	*0 0.4	1 0.68	1 1.04	*0 0.6
82 83.2 0.99	5.8 8	17 1.05	10 0.90	8 1.06	10 1.38	6 1.38	12 1.16	2 0.33	7 0.99	6 0.85	4 0.64
55090100 FORDWICH											
29 32.6 0.89	3.4 2	15 1.04	3 0.88	7 1.04	1 1.51	1 0.63	1 2.06	1 0.36	*0 0.8	*0 0.8	*0 0.8
81 80.7 1.00	7.4 9	9 0.86	10 1.17	15 1.25	7 1.35	5 0.85	12 1.58	7 0.75	5 0.67	7 1.02	4 0.56
56010100 MONAUGHTY											
31 33.4 0.93	0.3 2	13 0.96	2 0.77	8 1.06	2 0.79	2 0.91	1 0.72	*0 0.3	1 0.56	2 2.05	*0 0.5
85 81.9 1.04	1.8 9	9 1.04	9 0.81	9 0.99	7 0.97	13 1.24	7 1.29	7 0.99	7 0.97	10 1.17	7 0.99
56030100 COMBE											
40 34.0 1.18	4.0 3	13 1.03	6 1.15	9 1.30	*0 2.6	2 1.78	3 2.11	3 2.17	2 1.53	2 2.92	*0 0.6
97 83.7 1.16	11.5 9	13 1.05	9 1.04	10 0.87	13 1.25	9 1.47	8 1.59	12 1.55	13 1.62	7 0.97	3 0.44
56050100 MORTIMER'S CRO											
42 34.0 1.24	4.4 3	14 1.04	5 1.19	4 0.89	7 1.56	2 1.80	5 1.83	1 0.98	3 2.39	1 1.63	*0 0.6
105 82.8 1.27	14.6 9	11 0.97	8 1.03	13 1.25	10 1.42	12 1.37	12 1.60	8 1.25	16 1.99	10 1.12	5 0.76
56070100 MARLBROOK											
38 33.4 1.14	2.3 3	14 0.97	3 1.21	3 0.80	6 1.31	3 1.35	4 1.79	2 1.02	2 2.38	1 1.96	*0 0.4
95 80.3 1.18	9.0 9	13 1.07	9 1.06	7 0.87	9 1.00	9 1.38	13 1.65	10 1.83	10 1.08	6 0.93	9 1.30
56090100 WERGIN'S BRIDG											
38 36.4 1.04	0.3 3	15 1.03	7 1.21	6 1.11	2 0.76	4 1.19	2 1.14	1 0.91	*0 0.5	*0 0.8	1 1.93
98 87.1 1.13	10.7 9	15 1.06	14 1.19	11 1.22	9 1.00	14 1.80	11 1.25	11 1.45	5 0.78	6 0.81	2 0.37
56130100 DOLHELFA											
30 31.6 0.95	0.6 3	12 0.88	2 0.78	4 0.90	5 0.96	*0 1.6	1 1.11	1 1.00	1 1.31	3 3.01	1 2.04
79 74.2 1.06	22.3 7 **	16 0.93	9 0.97	9 1.20	5 0.70	4 0.90	5 0.86	2 0.53	6 0.88	6 0.96	17 2.86
56150100 LLANWRTHWL											
29 30.7 0.95	0.2 2	12 1.02	3 0.86	4 1.05	3 0.89	6 1.36	*0 0.4	*0 1.4	1 1.97	*0 1.0	*0 0.5
72 71.3 1.01	8.8 8	16 1.04	10 0.97	9 1.10	4 0.75	6 1.11	3 0.67	4 0.97	5 0.76	12 2.04	3 0.53
56170100 HAFODYGARREG											
42 30.8 1.36	7.8 2 *	12 1.02	6 1.20	3 1.31	5 1.51	7 1.81	3 2.21	2 1.35	1 1.93	3 3.79	*0 0.4
101 71.7 1.41	25.4 7 ***	16 1.05	12 1.17	9 1.19	7 1.21	7 1.59	6 1.10	10 2.27	8 1.09	14 2.37	12 2.26
56190100 BREDWARDINE											
29 30.7 0.94	0.4 2	13 1.02	3 0.71	4 0.89	2 1.05	1 0.47	*0 1.8	3 2.01	2 2.66	*0 0.7	1 2.17
64 71.5 0.90	1.5 7	18 0.99	6 0.87	9 0.99	4 0.67	3 0.92	5 0.69	4 1.43	6 0.85	5 0.99	4 0.68
56210100 HUNTSHAM BRIDG											
39 36.5 1.07	0.3 3	15 1.03	8 1.18	7 1.16	*0 0.7	3 1.06	4 1.30	1 0.91	*0 0.2	*0 0.6	1 1.72
97 86.3 1.12	8.1 9	14 0.99	13 1.03	14 1.35	6 0.94	10 1.07	6 1.02	14 1.60	7 1.17	11 1.44	2 0.39
57010100 U/S USK RESERV											
37 30.7 1.21	2.5 2	17 1.03	3 1.19	1 0.65	2 1.58	5 1.75	3 1.69	3 1.69	*0 1.0	3 3.88	*0 0.6
87 71.2 1.22	5.3 8	12 1.04	7 1.17	13 1.16	3 1.13	9 1.18	13 1.44	6 1.08	9 1.52	6 1.15	9 1.38
57030100 D/S USK RESERV											
35 31.5 1.11	0.8 3	15 1.02	6 1.18	2 1.35	3 1.59	1 0.48	3 1.25	2 1.77	1 0.65	*0 0.6	2 4.38
72 75.4 0.96	4.9 9	13 0.97	12 1.10	9 1.35	5 0.95	7 0.74	6 0.89	7 1.32	6 1.06	5 0.80	2 0.34
57050100 TRECASTLE											
28 30.7 0.91	2.3 3	13 1.01	5 1.17	4 1.30	1 0.38	2 0.72	2 0.74	*0 0.0	1 1.06	*0 0.9	*0 0.5
70 71.4 0.98	0.8 6	17 0.99	7 1.18	13 1.24	1 0.25	8 1.01	4 0.81	7 1.49	3 0.71	5 0.90	5 0.76
57070100 TRALLONG											
35 30.9 1.13	1.3 2	14 1.03	1 0.57	7 1.35	4 1.24	5 1.49	1 2.16	1 0.94	1 1.04	1 1.15	*0 0.5
81 72.4 1.12	3.6 7	17 1.05	10 1.06	13 1.36	3 0.90	8 1.29	7 1.33	6 1.37	7 1.26	6 0.93	4 0.67
57090100 BRECON TOWN BR											
33 31.5 1.05	1.3 3	13 1.02	4 0.69	3 0.99	2 1.02	4 1.83	3 0.95	1 1.42	*0 0.5	*0 0.8	3 6.16
84 73.8 1.14	13.3 9	19 1.04	7 0.75	8 1.06	5 0.94	7 1.18	7 1.21	3 0.60	9 1.65	7 1.19	12 2.30
57110100 LLANDETTY											
23 31.6 0.73	4.7 3	13 1.02	4 0.80	*0 3.8	2 1.02	2 0.73	2 0.90	*0 0.8	*0 1.0	*0 0.7	*0 0.6
61 74.2 0.82	7.5 9	19 1.05	9 1.06	7 0.85	3 0.56	3 0.55	4 0.80	4 0.70	7 1.22	3 0.49	2 0.34
57130100 CRICKHOWELL											
31 31.3 0.99	0.2 2	13 1.02	2 0.59	4 0.75	2 1.03	5 1.77	2 1.46	2 1.34	*0 0.7	*0 0.8	1 1.49
64 73.2 0.87	4.0 7	17 0.99	5 0.65	7 0.67	2 0.44	5 1.02	4 0.81	4 0.91	8 1.17	4 0.71	8 1.23

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
57150100 LLANELLEN BRID														
27	32.3	0.83	1.7	3	12	0.95	5	0.74	3	1.01	3	0.96	1	0.47
64	75.5	0.85	5.4	7	15	0.99	11	0.99	9	0.99	7	1.22	2	0.52
57170100 LLANTRISSANT														
37	34.4	1.07	0.8	2	18	1.04	5	1.17	4	0.89	1	0.74	3	1.36
84	79.8	1.05	1.4	8	13	1.05	18	1.11	11	1.12	5	0.76	5	0.84
58010100 PLASYMEIBION														
39	34.8	1.12	0.9	3	16	1.02	7	1.16	5	1.14	1	0.76	3	1.33
111	89.3	1.24	11.0	9	17	1.05	12	1.18	14	1.33	12	1.24	8	1.22
58030100 WEST OF LLANDI														
40	39.1	1.02	0.3	2	29	1.04	3	1.18	*0	0.7	2	0.77	3	1.08
132	105.2	1.25	22.8	9 **	26	1.05	14	1.03	21	1.35	9	0.98	4	0.72
58050100 LLAWHADEN														
42	39.6	1.06	0.2	1	29	1.03	3	1.16	1	1.31	5	1.54	3	1.31
121	107.1	1.13	3.6	9	29	1.05	15	1.18	17	1.19	13	1.22	11	1.45
59010100 PANT GLAS														
36	28.8	1.25	4.2	2	15	1.03	4	1.21	1	1.42	2	1.54	2	0.95
90	67.2	1.34	15.2	9	10	1.07	7	1.18	10	1.20	8	1.37	8	1.43
59030100 PONT Y FELIN														
34	32.0	1.06	0.6	2	16	0.96	5	1.18	1	0.44	3	1.57	2	0.89
82	80.2	1.02	5.8	7	20	0.92	10	1.16	10	1.01	6	0.93	11	1.42
59050100 BONT FECHAN														
35	31.2	1.12	0.8	2	15	1.03	4	1.19	4	1.08	2	1.55	4	1.46
86	77.1	1.12	5.8	8	14	1.06	8	1.03	12	1.24	11	1.29	10	1.25
60010100 CHESWICK GREEN														
25	28.4	0.88	2.6	2	11	0.95	2	1.15	7	1.36	3	0.93	*0	0.0
67	73.8	0.91	6.0	7	6	0.90	6	0.99	10	1.03	7	0.84	7	1.44
60050100 TEMPLE BALSALL														
33	31.7	1.04	3.5	3	10	1.02	6	1.00	6	1.33	3	1.54	4	1.77
81	79.8	1.02	3.9	9	9	1.05	10	1.18	10	1.10	10	1.54	8	1.05
60090100 BLYTHE BRIDGE														
32	33.7	0.95	2.7	3	13	1.03	6	1.15	3	1.37	3	0.94	5	1.02
89	89.5	0.99	9.3	9	11	1.05	12	1.07	6	1.12	13	1.42	9	1.18
61010100 RED BRIDGE, SH														
36	32.3	1.12	1.0	3	15	1.03	8	1.20	1	0.70	2	1.07	3	1.11
103	79.8	1.29	13.4	9	12	1.06	12	1.18	6	1.12	11	1.21	9	1.27
61030100 EAST HARLING														
34	32.3	1.05	0.9	3	14	1.03	8	1.21	2	0.90	*0	0.7	6	1.57
97	79.7	1.22	9.4	9	11	1.06	9	0.97	9	1.32	8	1.11	13	1.49
61050100 NUNS BRIDGE, T														
39	31.7	1.23	6.1	3	15	1.03	6	1.19	2	0.90	*0	0.6	5	1.30
100	79.1	1.26	15.8	8 *	12	1.06	14	1.03	10	1.22	4	1.26	10	1.46
61070100 BRANDON														
35	31.9	1.10	0.7	2	15	1.03	5	1.19	4	1.33	*0	0.6	5	1.51
102	80.0	1.27	11.8	8	10	0.96	15	1.10	11	1.33	5	1.54	9	1.41
61090100 BRANDON CREEK														
37	31.5	1.18	2.5	2	20	1.01	1	1.18	4	1.30	1	1.45	2	1.86
123	87.6	1.40	30.0	9 ***	21	1.04	10	1.18	9	1.17	14	1.47	10	1.24
61110100 HILGAY BRIDGE														
34	31.5	1.08	0.7	2	20	1.01	1	1.18	3	0.98	1	1.44	1	0.93
101	87.6	1.15	4.8	9	20	0.99	9	1.06	8	1.04	14	1.47	10	1.24
03130100 FLOWERPO														
33	37.4	0.88	1.9	3	16	0.93	7	1.03	2	0.54	1	0.38	1	0.47
82	94.5	0.87	12.8	9	12	0.91	10	0.73	3	0.29	8	0.78	3	0.45
07810100 WASHPOOL BRIDG														
32	29.0	1.10	0.5	2	13	1.02	4	0.89	3	1.31	3	1.58	3	1.07
88	70.4	1.25	6.0	7	9	1.03	14	1.14	6	1.26	9	1.22	9	1.25
10810100 CARTER'S LODGE														
26	32.5	0.80	2.9	3	11	1.04	2	0.75	6	0.98	3	0.45	1	0.91
52	74.1	0.70	11.6	9	6	0.78	4	0.77	8	0.97	4	0.47	6	0.68

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
10830100 HAWKLEY MILL											
31 29.6 1.05	2.1 3	11 1.02	5 0.97	3 1.06	1 0.31	2 0.74	3 2.13	2 2.00	3 2.03	*0 0.4	1 1.33
69 72.9 0.95	15.7 9	7 0.74	4 0.52	4 0.76	4 0.51	9 1.49	6 0.81	8 1.18	5 0.64	8 1.02	14 2.11
35810100 SOUTH TYNE HEA											
32 25.5 1.26	5.5 2	14 1.03	2 1.17	2 1.32	3 1.13	*0 0.5	4 1.66	1 1.44	1 2.08	2 1.45	3 5.38
63 57.0 1.11	5.7 7	12 1.05	3 0.59	7 1.14	5 1.13	3 0.61	5 1.01	6 1.56	8 1.47	5 0.91	9 1.71
37810100 COMER											
18 22.6 0.80	2.5 2	11 1.03	2 0.76	1 0.71	2 1.00	*0 0.5	1 0.69	*0 1.1	1 0.87	*0 0.8	*0 0.9
49 52.3 0.94	2.7 6	8 0.95	6 1.16	4 0.76	3 0.94	4 0.93	7 1.68	7 0.98	4 0.73	2 0.50	4 0.77
37830100 TEAPOT											
18 22.6 0.80	1.0 2	9 0.84	3 1.13	1 0.71	1 0.50	*0 0.5	1 0.69	*0 1.1	1 0.87	1 1.31	1 1.13
46 52.3 0.88	2.6 6	9 1.07	4 0.77	3 0.57	3 0.94	4 0.93	5 1.20	6 0.84	2 0.37	4 1.01	6 1.15
37850100 DALMARY											
18 22.8 0.79	1.6 2	10 0.93	1 0.38	1 0.70	*0 2.0	2 1.97	*0 0.9	*0 1.1	3 2.56	1 1.10	*0 0.9
47 52.8 0.89	3.3 6	7 0.83	4 0.77	5 0.95	2 0.62	4 0.83	4 1.09	6 0.84	4 0.73	3 0.69	8 1.53
43810100 U/S LOCH SGAMH											
22 22.6 0.97	0.4 2	11 1.03	3 1.13	2 1.42	2 1.00	*0 0.5	2 1.39	1 0.92	*0 1.2	*0 0.8	1 1.12
64 52.4 1.22	9.2 6	9 1.07	6 1.16	4 0.76	3 0.94	7 1.63	6 1.44	6 0.84	11 2.01	6 1.51	6 1.15
48810100 ACHAVANICH											
25 28.2 0.89	0.7 2	14 0.97	*0 0.8	2 1.37	2 0.78	2 0.60	*0 2.2	1 1.51	*0 0.9	3 1.91	1 3.15
54 65.8 0.82	8.1 7	9 0.97	6 0.64	2 0.67	4 0.62	3 0.43	6 1.13	7 1.44	9 1.25	4 0.55	4 0.65
48850100 WESTERDALE											
29 24.7 1.17	3.3 2	11 0.95	3 1.16	3 1.04	*0 0.0	*0 0.5	2 0.86	3 1.47	3 2.15	1 1.26	3 5.03
65 57.7 1.13	27.9 6 ***	8 0.86	7 1.03	5 1.10	2 0.64	2 0.46	4 0.80	6 0.69	6 1.32	6 1.27	19 2.93
51830100 WOOL											
30 29.1 1.03	0.1 2	12 1.02	6 1.11	4 1.34	1 0.55	4 1.08	1 1.23	1 1.26	*0 0.6	1 1.07	*0 0.2
69 70.6 0.98	3.9 7	10 1.03	14 1.08	4 0.87	7 1.06	9 1.48	5 0.85	4 0.53	5 0.70	7 1.22	4 0.91
53810100 VERELEY											
35 32.9 1.06	0.4 3	10 0.94	6 1.02	6 1.36	6 1.10	2 1.25	1 2.02	*0 1.4	3 2.31	1 0.73	*0 0.4
88 75.0 1.17	4.9 9	6 1.01	7 0.81	8 1.20	12 1.28	9 1.14	8 1.30	13 1.36	11 1.35	6 0.93	8 1.30
53830100 BRATLEY											
30 33.0 0.91	1.1 4	12 1.05	4 0.80	6 1.03	4 0.99	1 0.62	*0 0.5	*0 1.7	*0 1.4	1 1.02	2 4.74
56 75.0 0.75	7.6 9	7 1.02	8 1.03	6 0.81	8 0.92	5 0.64	4 0.61	7 0.74	4 0.55	3 0.42	4 0.65
53850100 OCKNELL											
29 33.0 0.88	1.1 4	11 0.96	3 0.60	6 1.03	5 1.24	*0 1.6	*0 0.5	1 0.58	1 0.71	1 1.02	1 2.37
63 75.0 0.84	6.9 9	7 1.02	8 1.03	5 0.68	7 0.81	7 0.89	9 1.37	5 0.51	6 0.88	3 0.42	6 0.97
56230100 REDBROOK											
41 37.1 1.11	0.8 3	15 1.03	11 1.17	4 1.31	4 1.50	2 0.90	2 0.90	1 0.88	*0 0.2	*0 0.9	2 3.16
98 87.9 1.12	6.6 9	16 1.05	12 0.83	8 0.97	12 1.32	5 0.83	8 0.90	12 1.54	9 1.39	10 1.48	6 1.19
56810100 CRUG											
30 30.4 0.99	0.0 2	17 1.02	2 0.80	2 0.86	1 0.52	2 1.79	4 1.73	1 0.60	*0 0.2	1 0.98	*0 0.7
71 69.4 1.02	3.6 7	13 1.04	5 1.19	9 1.10	5 0.69	6 1.08	12 1.50	6 0.81	7 1.28	3 0.73	5 0.76
58810100 MYNACHLOG-DDU											
33 27.6 1.19	2.0 2	13 1.03	2 1.21	3 1.34	4 1.54	2 1.82	3 1.14	1 1.44	3 1.21	1 0.74	1 4.26
83 62.0 1.34	12.3 7	5 1.07	11 1.07	4 1.32	8 1.37	7 1.44	12 1.45	6 1.14	9 1.34	15 2.03	6 1.07
62010100 U/S BRACKLEY											
21 28.8 0.73	3.0 4	10 0.85	2 0.38	2 0.89	3 0.96	1 0.62	1 0.53	1 0.85	*0 0.4	1 1.20	*0 0.5
65 70.5 0.92	5.8 8	8 0.83	6 0.58	4 0.65	7 1.06	6 0.84	5 0.94	6 0.80	7 1.03	4 0.63	12 2.61
62130100 SHARNBROOK											
34 32.4 1.05	0.3 3	15 1.03	2 0.78	4 1.07	1 0.53	5 1.33	2 1.49	3 1.22	*0 0.5	1 1.23	1 1.32
105 83.9 1.25	17.2 8 *	10 0.96	17 1.17	6 1.15	4 1.19	12 1.28	7 0.96	13 1.54	8 0.88	12 1.28	16 2.35
62150100 ROXTON LOCK											
30 35.7 0.84	2.2 3	13 1.02	7 1.04	2 0.54	2 0.44	3 1.82	*0 2.2	1 0.70	2 1.11	*0 0.3	*0 0.6
79 89.4 0.88	11.1 9	9 0.94	11 0.99	6 0.67	6 0.65	5 0.91	3 0.32	7 0.64	17 1.48	9 1.25	6 1.02
63810100 BONEMILLS HOLL											
21 27.0 0.78	2.7 2	9 1.02	1 0.61	2 0.86	2 0.50	1 0.30	3 1.14	1 0.58	1 1.32	*0 1.1	1 1.49
52 66.5 0.78	6.5 8	5 1.05	5 1.18	7 1.04	3 0.58	3 0.50	9 0.87	5 0.86	5 0.69	4 0.45	6 0.82
65010100 BULLY HOLE BOT											
29 28.9 1.00	0.1 2	12 1.02	7 1.04	2 1.31	3 0.90	2 1.86	1 1.16	1 0.60	1 1.36	*0 0.7	*0 0.5
67 68.6 0.98	0.9 7	11 1.05	7 1.05	6 0.98	9 1.05	6 0.93	7 0.81	8 1.44	2 0.63	9 1.02	2 0.49

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS		CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
66150100 STOURPORT												
38	34.0	1.12	3.4	2	16	1.03	3	1.19	3	0.66	3	0.92
91	93.7	0.97	5.1	9	17	0.97	8	0.93	10	0.89	7	0.91
67010100 SPECULATION												
30	29.3	1.02	0.7	2	12	1.02	8	1.06	2	1.37	3	1.16
75	69.5	1.08	6.0	8	10	1.05	9	1.08	8	1.33	7	0.97
68010100 GRANGE WOOD												
33	29.4	1.12	5.4	3	10	0.93	6	0.89	5	1.33	1	0.78
80	69.7	1.15	30.3	8 ***	8	0.93	7	0.92	5	0.66	5	0.70
68110100 LONGHAM												
39	35.6	1.10	1.9	3	16	1.03	3	1.20	3	0.99	8	1.39
101	93.9	1.08	3.7	9	16	1.06	5	0.84	9	1.21	10	1.11
69110300 MALTHOUSE												
38	34.9	1.09	0.6	3	15	1.03	3	1.16	5	1.31	4	1.21
110	93.5	1.18	7.6	8	16	1.04	5	1.18	17	1.32	6	1.15
69130300 BABLOCK HYTHE												
41	33.9	1.21	2.5	2	16	1.03	3	1.19	6	1.32	5	1.52
120	93.9	1.28	11.7	8	19	1.03	10	1.16	14	1.33	13	1.44
69150300 SHILLINGFORD												
42	33.6	1.25	4.5	2	16	1.02	3	1.17	8	1.34	2	1.04
103	93.9	1.10	1.6	8	23	1.03	6	1.17	16	1.19	8	1.25
69170300 READING												
34	34.1	1.00	2.1	2	15	1.02	3	1.15	6	1.30	5	1.27
111	93.7	1.19	7.3	9	17	1.03	10	1.17	14	1.17	8	1.38
69190300 SPADE OAK												
33	34.3	0.96	1.2	3	15	1.03	3	0.88	4	1.06	5	1.28
98	93.5	1.05	4.8	8	17	1.04	10	1.19	12	1.15	8	1.23
69210300 RUNNYMEDE												
32	33.6	0.95	1.8	2	16	1.02	3	1.17	7	1.17	2	1.04
79	94.1	0.84	9.5	8	22	0.98	6	1.17	10	0.74	7	1.09
70010100 LEDGOWAN												
24	22.6	1.06	0.8	2	11	1.03	3	1.13	2	1.41	3	1.50
57	52.5	1.09	6.6	6	9	1.07	6	1.16	7	1.33	3	0.93
71040100 D/S CRANBORNE												
29	33.2	0.87	3.0	3	11	0.87	3	1.15	4	0.86	7	1.35
70	81.0	0.86	17.1	9 *	9	0.79	5	0.73	4	0.53	9	0.97
71070100 GREAT RHYMES C												
37	35.4	1.04	0.5	2	14	1.04	4	0.92	6	1.00	2	0.75
93	85.2	1.09	5.6	8	11	1.06	11	1.07	13	1.08	4	1.20
71100100 PINNOCKS MOOR												
41	35.8	1.14	1.2	3	14	1.03	6	1.01	6	1.33	6	1.16
91	86.3	1.05	5.0	8	11	0.96	13	1.08	10	1.09	9	1.07
71130100 ROMFORD BRIDGE												
42	33.7	1.25	4.1	3	14	1.02	3	1.17	6	1.11	5	1.53
107	83.0	1.29	11.9	9	14	1.06	8	1.18	7	1.16	13	1.18
71160100 REDMANS HILL												
41	33.7	1.22	2.8	3	14	1.02	3	1.17	7	1.30	4	1.23
98	83.1	1.18	5.3	9	14	1.06	6	1.00	8	1.31	14	1.14
71190100 VERWOOD												
34	34.8	0.98	0.5	4	13	1.03	4	0.78	5	0.96	5	1.11
72	84.7	0.85	10.7	9	8	1.05	13	1.00	7	0.95	12	1.16
71220100 KING'S FARM												
39	33.2	1.18	3.1	3	14	1.03	4	0.79	3	1.32	5	1.47
99	81.7	1.21	7.3	9	9	1.05	9	0.96	9	0.92	6	1.02
71270100 EAST MOORS FAR												
36	32.7	1.10	0.5	2	14	1.03	5	1.17	4	1.06	3	1.17
80	80.9	0.99	3.2	8	9	0.95	10	1.17	12	1.12	3	0.57
71430100 UPPER FARM												
34	29.0	1.17	1.8	3	12	1.02	6	1.11	3	1.30	3	1.20
78	70.4	1.11	4.2	8	9	1.02	13	1.13	6	0.95	6	0.98

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
71450100 PAINS MOOR											
36 30.1 1.20	6.4 2 *	11 0.95	5 1.15	3 0.82	2 0.80	5 1.33	1 2.04	1 1.02	2 1.88	4 3.39	2 3.94
82 72.9 1.13	20.7 8 **	10 1.06	11 1.00	3 0.66	7 1.06	6 0.80	5 0.85	5 0.70	7 0.92	11 1.65	17 2.59
71490100 IN WOOD, U/S T											
22 32.8 0.67	5.0 3	8 0.83	4 1.12	4 0.65	2 0.32	1 0.59 *0	1.0	2 1.42	1 0.92 *0	1.6	*0 0.4
53 74.7 0.71	12.1 9	7 1.02	6 0.97	4 0.53	7 0.80	4 0.44	6 0.87	9 1.06	6 0.83	2 0.28	2 0.31
71530100 D/S WOOD											
28 31.5 0.89	3.8 3	8 0.92	5 1.15	5 0.95	1 0.19	2 0.70 *0	0.9	3 2.10	2 2.01	2 1.42 *0	0.5
63 71.9 0.88	3.7 9	7 1.06	6 1.02	8 1.11	5 0.78	5 0.48	6 0.99	7 0.81	6 0.91	6 0.84	7 1.00
71890100 HORTON HEATH											
38 32.0 1.19	3.1 3	11 1.03	2 0.77	7 1.29	5 1.50	3 0.77	2 1.06	4 2.82	2 1.61	2 1.91 *0	0.5
91 76.6 1.19	8.5 8	5 1.04	7 0.91	14 1.25	4 0.77	8 0.96	4 0.81	13 1.37	11 1.38	12 1.26	13 1.75
71920100 NEWMAN'S LANE											
43 34.5 1.25	4.3 4	13 1.03	2 0.76	7 1.05	8 1.51	3 1.36	3 1.62	2 1.98 *0	0.8	2 2.26	3 5.79
94 82.9 1.13	9.2 9	12 0.98	8 1.20	10 1.03	9 1.26	5 0.81	8 1.19	9 0.96	9 0.83	11 1.56	13 1.88
02210100 VENN HILL											
31 29.9 1.04	0.7 3	11 1.02	6 1.00	5 1.09	1 0.77 *0	1.1	5 2.33	1 0.58	1 1.02 *0	0.6	1 1.38
86 71.5 1.20	6.4 7	6 1.03	11 1.17	9 1.08	7 0.89	5 1.04	14 1.57	7 1.47	11 1.45	9 1.28	7 1.00
02230100 BEERHALL											
32 29.7 1.08	0.4 3	12 1.02	7 1.17	4 1.06	1 0.76	1 0.91	3 2.26	2 0.81	2 2.77 *0	0.8	*0 0.5
76 71.0 1.07	17.9 9 *	9 1.05	9 1.19	9 1.09	7 1.07	8 1.15	12 1.80	7 1.25	12 1.73	3 0.40 *0	6.3
02250100 KIT BRIDGE											
35 30.2 1.16	1.5 3	11 1.02	6 1.15	7 1.29	2 1.54	2 1.89	4 1.81	2 0.97	1 1.03 *0	0.5	*0 0.7
78 72.5 1.08	9.5 8	6 1.02	10 1.07	11 1.31	10 1.28	5 1.03	12 1.47	9 1.53	4 0.48	8 1.17	3 0.43
02270100 CRAWLEY BRIDGE											
31 33.0 0.94	0.8 2	16 1.03	4 1.21	3 0.98	2 0.63	3 0.88	1 0.79	1 1.51	1 1.02 *0	1.0	*0 0.6
74 80.4 0.92	4.1 8	12 1.05	13 1.02	5 0.86	8 0.87	8 1.12	3 0.42	8 1.64	8 1.22	6 0.75	3 0.40
02290100 GAMMONS HILL											
36 34.7 1.04	0.4 4	13 1.03	7 1.15	5 0.95	4 1.02	1 0.59	2 1.45	2 1.48 *0	1.0	1 1.26	1 1.77
94 85.6 1.10	3.0 9	14 1.06	10 1.19	9 1.18	9 0.97	12 1.21	7 1.00	5 0.90	11 1.48	11 1.08	6 0.86
02310100 CORYTON											
43 33.3 1.29	4.9 3	12 1.03	7 1.17	6 1.35	4 1.52	5 1.50	2 2.01	1 0.91	4 2.07	1 1.53	1 1.89
114 81.2 1.40	24.6 9 **	8 1.05	10 1.17	10 1.01	7 1.19	15 1.59	12 1.40	7 1.08	13 1.53	20 2.29	12 1.58
02330100 EASY BRIDGE											
38 34.1 1.11	0.9 3	12 1.02	6 1.01	5 1.32	5 0.98	3 1.28	3 2.22	1 1.39	2 0.92	1 2.20 *0	0.4
93 82.3 1.13	14.9 9	9 1.04	9 1.06	10 1.11	13 1.46	13 1.47	11 1.38	9 1.67	13 1.32	5 0.62	1 0.14
37040100 BLACKDUB											
35 31.9 1.10	0.5 2	11 0.95	5 1.19	6 1.36	4 1.00	5 1.52 *0	0.9	1 0.79	2 1.91 *0	0.8	1 2.63
87 73.3 1.19	11.7 8	7 0.92	12 0.88	9 1.08	9 1.16	8 1.81	5 1.04	7 0.91	6 0.97	11 1.78	13 1.93
37910100 BLAIRCREECH											
20 26.7 0.75	3.5 2	13 1.04	1 0.57	3 1.03 *0	0.7	1 0.27 *0	0.9	1 0.66 *0	1.4	*0 0.9	1 2.01
49 62.6 0.78	5.0 7	9 0.96	7 0.75	2 0.67	3 0.67	7 1.06	4 0.80	3 0.43	3 0.58	7 0.98	4 0.72
72050100 WHEEB BRIDGE											
27 22.9 1.18	1.3 2	11 1.03	3 1.13	2 1.40	2 0.99	1 2.00	1 0.69 *0	1.1	2 1.65	2 1.91	3 3.76
60 53.1 1.13	35.7 6 ***	8 0.95	4 0.59	2 0.54	4 1.24	4 0.83	4 0.99	4 0.54	5 0.98	6 1.49	19 3.41
72170100 NEWTON STEWART											
28 29.3 0.95	0.3 3	11 1.02	5 0.97	4 1.08	3 0.93	2 1.26 *0	1.3	1 1.47	2 1.40 *0	0.8	*0 0.6
81 68.9 1.17	8.4 6	12 1.05	11 0.99	4 1.08	9 1.15	6 1.25	6 1.12	3 0.65	14 1.97	9 1.41	7 1.06
73050100 ARIUNDLE OAKWO											
25 25.3 0.99	0.3 2	11 0.87	2 1.14	1 0.65	3 1.52	1 0.87	4 1.49 *0	0.4	2 1.26	1 0.85 *0	0.4
53 59.4 0.89	2.7 6	11 0.98	5 0.84	4 1.29	5 0.59	5 1.03	4 0.59	4 1.17	5 1.11	4 0.71	6 1.13
73110100 ANAHEILT											
29 28.4 1.02	0.4 2	14 1.03	1 0.58	5 1.10	2 1.58	2 1.19	2 1.14	1 0.92	1 0.68	1 1.20 *0	0.5
65 67.3 0.97	2.9 7	11 0.83	6 0.77	5 0.83	7 1.08	9 1.49	3 1.12	5 0.66	5 1.05	7 1.05	7 1.17
74050100 U/S LOCH CALUI											
26 27.3 0.95	1.2 2	12 0.96	2 0.77	3 1.00 *0	1.3	1 0.61	4 1.31 *0	0.7	1 0.85	3 4.57 *0	0.6
61 64.1 0.95	2.4 7	11 0.97	11 1.17	2 0.55	4 0.62	5 0.93	5 1.00	5 0.83	6 1.19	4 0.69	8 1.30
74130100 ACHALONE											
31 28.2 1.10	1.6 2	12 1.03	3 0.69	4 1.05	1 1.44	3 1.34	4 1.82	1 1.03 *0	1.0	*0 0.6	3 4.67
62 66.1 0.94	8.7 8	12 0.84	6 0.78	3 0.49	3 0.56	7 1.25	3 0.61	10 1.96	5 0.94	5 0.88	8 1.32

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
74170100 CROSSKIRK														
35	28.8	1.22	3.8	3	11	1.04	4	1.16	4	0.89	3	1.20	4	1.52
72	65.9	1.09	4.7	7	8	1.05	12	0.99	7	1.01	3	0.77	4	0.90
75050100 DEN MOSS														
27	25.1	1.08	0.2	2	12	1.04	3	1.14	4	1.35	1	1.45	*0	0.6
57	58.0	0.98	3.6	6	9	0.88	5	0.83	6	0.99	4	0.76	3	0.67
75110100 LANDHALLOW														
27	25.5	1.06	0.2	2	12	1.03	4	1.15	2	0.89	2	1.51	1	0.59
63	58.5	1.08	6.1	6	10	1.06	11	1.08	6	1.02	3	0.76	3	0.49
76050100 CAPLICH														
25	27.9	0.89	1.0	2	11	0.94	5	1.16	4	1.06	1	1.46	1	0.45
47	65.3	0.72	9.6	7	11	0.77	7	0.92	7	1.16	3	0.65	3	0.53
76110100 STRATH OYKEL														
26	29.8	0.87	0.7	2	13	0.89	3	1.18	3	0.96	3	0.76	*0	1.1
39	70.8	0.55	16.5	6 *	15	0.75	2	0.47	4	0.75	1	0.16	3	0.60
77050100 FORNETH														
28	28.5	0.98	0.8	2	14	1.02	3	0.89	2	0.88	1	1.46	4	1.45
59	64.7	0.91	4.2	6	10	0.88	4	0.96	7	0.94	8	1.03	6	1.38
56910100 KESTY														
23	30.4	0.76	5.7	2	17	1.03	1	1.14	1	0.33	1	0.53	2	1.21
71	70.1	1.01	5.8	8	11	0.96	6	1.18	9	1.12	2	0.61	11	1.13
56930100 KINGTON URBAN														
31	32.8	0.95	0.4	2	16	1.02	2	0.60	3	0.98	4	1.23	3	0.90
72	78.5	0.92	5.5	8	19	1.04	9	0.90	6	0.80	9	1.04	6	1.11
56950100 FOLLY FARM														
35	32.7	1.07	1.0	2	12	0.95	5	1.17	5	1.11	7	1.54	1	0.46
80	79.1	1.01	3.3	8	12	0.98	9	1.05	15	1.35	6	1.02	8	1.32
56970100 IVINGTON														
34	35.1	0.97	3.4	3	13	1.03	5	0.98	2	0.34	1	1.46	3	0.77
85	84.7	1.00	3.6	9	10	1.05	10	0.97	5	0.84	12	1.10	7	0.74
82050100 FELINDRE														
33	30.8	1.07	0.7	2	15	1.02	4	1.17	2	1.31	2	1.08	4	1.45
60	72.4	0.83	5.9	8	12	1.05	6	0.88	5	0.84	3	0.66	7	0.80
82090100 PENNANT POUND														
27	33.6	0.80	3.2	3	16	1.02	2	0.40	2	0.44	2	1.02	2	1.82
64	82.5	0.78	6.1	8	16	0.98	8	0.63	8	0.83	7	0.83	3	0.79
82130100 BRAMPTON BRYAN														
36	33.6	1.07	1.4	3	15	1.03	5	0.85	4	0.89	3	1.52	1	0.89
75	82.1	0.91	6.3	8	16	0.99	11	1.00	6	0.67	13	1.32	2	0.46
82170100 TENBURY														
38	33.3	1.14	1.5	2	14	0.97	3	1.20	6	1.13	5	1.32	2	0.73
94	78.9	1.19	11.5	9	12	0.98	9	1.05	11	1.05	9	1.24	5	0.71
82210100 POWICK BRIDGE														
35	37.5	0.93	0.6	3	19	1.04	5	0.86	3	0.98	3	0.75	2	0.76
64	89.9	0.71	13.3	8	18	1.01	11	0.88	7	0.77	5	0.65	2	0.33
83050100 CORPUSTY														
27	31.8	0.85	8.0	2 *	9	0.62	1	0.24	2	0.66	1	1.55	4	1.04
62	79.1	0.78	19.7	8 *	9	0.79	6	0.50	4	0.41	1	0.32	5	0.73
83090100 WHITEHOUSE FAR														
37	31.8	1.16	3.1	2	14	0.96	4	0.95	4	1.32	1	1.54	5	1.30
74	79.3	0.93	17.0	8 *	10	0.88	8	0.63	6	0.67	3	1.17	5	0.67
83130100 BUXTON MILL														
33	31.6	1.04	0.8	2	15	0.96	4	0.94	2	0.92	1	0.80	2	1.16
67	83.1	0.81	8.7	8	6	0.91	16	1.09	10	1.01	5	0.98	3	0.68
83170100 COLTISHALL BRI														
34	31.7	1.07	0.3	3	15	1.03	6	1.19	2	0.90	*0	0.6	5	1.30
72	79.2	0.91	6.0	8	12	1.06	14	1.03	7	0.85	3	0.94	6	0.88
84210100 LOWER BROOK														
45	37.0	1.22	3.5	3	16	1.03	5	1.20	8	1.33	4	1.56	5	1.85
97	94.2	1.03	3.2	9	12	1.05	10	0.89	8	1.35	13	1.06	13	1.24

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
84250100 ROMSEY											
38 37.5 1.01	0.6 3	16 1.03	5 1.19	7 1.17	2 0.62	4 1.23	*0 1.7	2 1.45	2 1.56	*0 0.4	*0 0.4
85 95.9 0.89	11.1 9	12 1.04	10 0.89	8 1.20	14 1.14	14 1.27	9 1.11	4 0.47	8 0.78	3 0.29	3 0.51
84290100 SKIDMORE											
41 37.0 1.11	0.9 2	15 1.03	4 1.17	8 1.07	3 0.94	2 1.27	4 1.30	2 1.38	2 1.57	1 2.03	*0 0.4
89 94.4 0.94	5.9 9	10 0.95	11 0.98	7 1.19	12 0.97	10 1.22	14 1.38	7 0.78	9 0.79	5 0.55	4 0.62
85050100 PIDDLETRENTHID											
27 29.2 0.92	0.8 2	13 1.03	5 1.13	3 1.01	1 0.55	3 1.10	*0 1.8	*0 0.8	1 1.56	1 0.98	*0 0.3
66 71.0 0.93	4.9 7	10 1.04	14 1.16	4 0.86	6 0.91	9 1.27	7 1.30	4 0.53	5 0.72	5 0.77	2 0.43
85090100 DRUCE											
32 35.3 0.91	0.6 3	14 0.96	6 1.19	2 0.53	5 1.09	*0 2.2	2 1.13	1 0.59	1 3.72	1 1.16	*0 0.5
70 86.9 0.81	7.9 9	13 0.99	8 1.17	10 0.95	8 0.77	5 0.71	4 0.46	5 0.93	9 0.88	6 0.75	2 0.30
85130100 BROCKHILL BRID											
45 38.8 1.16	2.2 3	19 1.02	9 1.15	5 1.13	4 1.53	3 1.85	3 2.21	*0 0.4	1 0.86	*0 0.3	1 2.28
109 95.0 1.15	7.1 9	18 1.05	19 1.12	15 1.25	11 1.19	8 1.35	11 1.65	7 1.04	9 1.27	8 1.13	3 0.50
85170100 WAREHAM											
41 38.4 1.07	1.4 3	18 1.02	8 0.93	6 1.38	4 1.54	2 1.84	2 1.12	*0 0.7	1 1.15	*0 0.5	*0 0.3
94 94.0 1.00	5.1 9	15 1.05	20 1.07	11 1.06	11 1.11	7 1.18	8 1.12	7 1.17	9 1.11	3 0.39	3 0.51
85210100 MIDDLE BERE											
35 37.4 0.94	0.4 3	15 0.96	5 0.85	7 1.13	4 0.89	1 0.94	1 0.79	1 2.72	1 0.68	*0 0.7	*0 0.3
84 90.9 0.92	5.2 9	13 0.98	10 1.05	17 1.24	6 0.65	7 1.26	5 0.58	6 0.87	10 1.00	6 0.75	4 0.65
03810100 GOAT HILL											
31 32.3 0.96	0.1 2	16 1.01	3 0.90	4 0.89	2 1.58	*0 1.1	1 0.56	2 1.35	1 0.52	2 2.09	*0 0.1
65 71.1 0.91	1.6 8	8 1.02	11 0.93	9 1.07	5 0.97	5 0.91	5 0.67	7 1.01	5 0.72	5 0.54	5 2.78
03850100 COW CASTLE											
35 32.5 1.08	0.6 2	19 1.02	4 0.96	2 1.35	1 0.75	4 1.78	1 0.71	2 1.20	2 1.60	*0 0.0	*0 0.4
88 82.8 1.06	1.7 7	32 1.05	8 1.07	6 1.00	6 1.01	8 1.07	8 0.97	5 2.16	8 1.34	4 0.96	3 0.65
03890100 SOUTH HILL											
32 32.6 0.98	0.4 2	19 1.03	5 1.20	1 0.67	1 0.76	2 1.14	3 1.59	1 0.59	*0 1.3	*0 0.0	*0 0.5
87 82.7 1.05	7.5 7	29 1.05	12 1.19	8 1.35	6 1.01	8 1.07	13 1.59	3 1.31	4 0.67	2 0.47	2 0.42
03930100 PIXTON HILL											
37 32.6 1.14	1.1 2	19 1.03	5 1.20	2 1.34	2 1.50	3 1.08	1 1.12	2 1.20	2 1.59	*0 0.0	1 2.14
96 82.7 1.16	6.4 7	29 1.01	11 1.19	6 1.01	8 1.34	8 0.94	11 1.52	2 0.88	6 1.01	5 1.21	10 2.07
07710100 GATCOMBE HILL											
27 34.4 0.78	2.7 3	13 0.95	2 0.60	4 0.78	3 0.65	3 1.31	1 0.43	*0 1.0	1 1.40	*0 0.8	*0 0.5
63 83.7 0.75	12.8 8	13 1.05	5 0.84	11 1.04	7 0.72	1 0.26	1 0.13	6 0.70	5 0.48	6 0.79	8 1.20
07730100 SLAUGHTERFORD											
36 34.6 1.04	0.5 3	14 1.02	4 0.79	6 1.32	2 0.78	5 1.14	2 1.51	1 1.50	1 1.22	1 1.05	*0 0.6
70 85.2 0.82	4.9 8	12 1.05	7 0.68	3 0.45	9 0.98	6 0.76	9 0.97	2 0.41	9 0.95	8 0.83	5 0.78
07750100 ASHLEY											
30 35.2 0.85	1.6 3	14 1.02	5 0.84	2 0.53	2 0.77	4 0.87	1 0.75	1 1.01	*0 0.8	1 1.20	*0 0.6
61 86.4 0.71	10.5 8	11 0.96	11 1.00	5 0.74	8 0.81	4 0.60	5 0.50	3 0.63	6 0.59	5 0.56	3 0.45
56710100 LLANVEYNOE											
34 31.6 1.08	1.9 2	14 1.03	4 1.17	4 1.29	2 1.53	5 1.51	2 0.61	2 1.47	1 4.32	*0 1.5	*0 0.4
94 76.5 1.23	11.7 7	9 1.05	12 1.17	8 1.19	5 1.30	13 1.31	13 1.68	14 1.71	6 1.29	5 0.54	9 1.21
56730100 CLODOCK											
35 33.6 1.04	0.9 3	14 1.02	7 1.18	7 1.17	2 1.56	1 0.90	1 0.55	*0 1.1	2 1.52	*0 0.7	1 1.56
89 82.1 1.08	5.7 8	14 1.05	12 1.07	11 1.22	12 1.20	5 0.90	5 1.19	7 0.91	9 1.15	3 0.46	11 1.61
56750100 GREAT GOYTRE											
40 33.3 1.20	2.3 3	13 1.02	9 1.18	5 1.33	4 1.23	1 1.81	2 1.12	1 1.01	4 3.09	1 1.38	*0 0.6
112 81.1 1.38	17.1 8 *	14 1.05	14 1.16	12 1.34	15 1.45	7 1.58	9 2.04	7 1.13	13 1.76	11 1.51	10 1.49
56770100 ROCKFIELD											
30 35.8 0.84	1.1 2	12 0.83	4 1.19	5 0.74	1 0.76	3 0.92	4 1.07	1 0.55	*0 0.0	*0 0.2	*0 0.8
88 85.9 1.02	5.5 9	9 0.95	11 0.91	9 1.11	7 0.74	12 1.29	8 1.12	7 0.90	11 1.34	4 0.54	10 1.41
64050100 SOUTH BREWHAM											
27 32.0 0.84	4.9 3	12 1.03	3 1.15	4 1.10	6 1.05	2 0.58	*0 1.3	*0 1.1	*0 1.0	*0 1.1	*0 0.5
81 77.5 1.04	7.5 9	10 1.05	6 1.02	7 1.05	11 1.39	6 0.74	10 1.25	4 0.56	10 1.60	7 0.69	10 1.27
64090100 WYKE											
32 33.2 0.97	1.7 3	14 1.02	4 0.79	3 0.97	1 0.51	2 0.61	5 1.55	2 2.87	*0 0.7	1 1.40	*0 0.8
81 81.9 0.99	1.6 9	14 1.06	7 1.04	7 0.91	7 0.78	6 0.81	8 1.15	8 1.18	7 0.82	9 1.05	8 1.14

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI	SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
64130100 TOOTLE BRIDGE												
38 36.8 1.03	3.1 3		16 0.95	7 0.91	3 1.37	2 0.62	1 0.60	3 1.09	*0 0.7	1 1.38	3 4.66	2 5.01
85 90.4 0.94	11.7 9		15 0.98	14 0.87	5 0.62	6 0.85	4 0.42	3 0.55	6 0.89	11 1.19	13 1.80	8 1.37
64170100 LIBERTY FARM												
31 31.5 0.99	0.7 2		20 1.01	*0 0.8	3 0.98	*0 0.7	1 0.93	1 0.36	2 2.00	*0 0.7	3 3.89	1 1.40
73 87.6 0.83	7.6 9		21 1.04	6 0.71	9 1.17	7 0.74	4 0.50	5 0.99	10 1.03	4 0.58	5 0.79	2 0.35
66910100 D/S LEM BROOK												
26 30.5 0.85	4.6 2		15 1.03	3 0.90	2 0.92	2 1.06	3 1.43	1 0.45	*0 1.4	*0 1.5	*0 0.6	*0 0.6
52 71.7 0.73	9.3 7		13 1.07	4 0.94	5 0.66	4 0.57	5 0.69	6 0.68	4 0.73	5 1.10	2 0.26	4 0.57
66930100 U/S DOWLES MAN												
26 31.5 0.82	1.8 3		14 0.96	1 0.39	4 1.30	1 0.53	3 0.77	1 0.44	*0 1.0	*0 0.5	2 1.76	*0 0.6
54 74.7 0.72	9.7 8		11 0.90	5 0.66	6 1.00	3 0.41	4 0.42	6 0.81	5 0.84	5 1.34	6 0.73	3 0.44
82810100 WHITCOTT KEYSE												
32 33.6 0.95	0.4 2		16 0.96	4 1.22	6 1.14	*0 1.9	2 1.87	2 1.11	*0 1.1	2 1.51	*0 0.6	*0 0.6
90 82.3 1.09	3.0 8		16 0.93	13 1.19	11 1.13	10 1.18	3 0.89	11 1.47	8 1.25	6 1.05	7 0.97	5 0.87
82850100 PURSLOW												
36 33.5 1.08	0.9 2		17 1.02	4 0.97	4 1.07	4 1.54	2 1.84	2 1.10	*0 1.1	2 1.54	1 1.79	*0 0.6
91 81.6 1.12	8.4 8		19 1.04	11 0.94	7 0.94	14 1.42	5 1.55	8 1.40	3 0.44	7 1.17	8 1.13	9 1.64
82890100 JAY												
26 33.4 0.78	4.5 3		13 1.02	7 0.92	2 0.45	1 0.39	2 1.88	*0 1.3	*0 1.3	1 0.83	*0 0.4	*0 0.7
80 81.7 0.98	4.1 8		12 0.90	12 1.07	9 0.99	11 1.00	4 1.01	7 1.70	9 1.09	5 0.72	8 1.13	3 0.45
86050100 LEIGH BRIDGE												
33 32.5 1.01	0.3 2		19 1.02	4 0.96	1 0.67	1 0.76	2 0.89	1 0.71	2 1.19	1 0.80	*0 0.0	2 4.56
81 82.8 0.98	3.7 7		29 0.95	8 1.07	6 1.00	8 1.34	6 0.81	6 0.73	1 0.43	5 0.83	4 0.96	8 1.73
86090100 FINGLE BRIDGE												
29 32.6 0.89	1.4 2		19 1.02	3 0.72	1 0.67	2 1.51	2 0.89	1 0.71	1 0.60	*0 1.3	*0 0.0	*0 0.4
72 82.7 0.87	4.6 7		32 1.05	8 1.07	4 0.67	6 1.00	6 0.81	6 0.73	1 0.43	4 0.67	4 0.96	1 0.22
86130100 WHETCOMBE BART												
38 33.4 1.14	1.3 3		13 1.03	8 1.05	5 1.36	4 1.54	2 1.21	2 1.47	2 1.10	*0 0.8	2 3.43	*0 0.6
101 81.7 1.24	14.4 8		17 0.94	11 1.18	9 0.91	8 1.51	9 1.26	6 1.45	10 1.34	9 1.36	7 1.03	15 2.18
87050100 CODDA FORD												
29 32.5 0.89	0.9 2		16 1.00	6 0.90	*0 0.0	3 0.92	*0 0.5	2 1.05	2 0.75	*0 0.4	*0 1.0	*0 0.1
59 71.7 0.82	9.1 6		8 1.01	17 0.97	2 0.86	4 0.55	4 0.76	7 1.35	13 0.98	1 0.91	3 0.29	*0 1.3
87090100 DRAYNES BRIDGE												
33 32.6 1.01	0.3 2		19 1.03	3 0.72	2 1.35	1 0.80	2 0.93	1 0.76	2 1.13	1 0.76	*0 0.1	2 3.93
80 81.5 0.98	3.7 7		21 1.04	15 1.04	7 0.94	7 1.18	9 1.17	5 0.85	5 1.01	7 1.19	2 0.46	2 0.42
87130100 LEBALL BRIDGE												
28 32.6 0.86	2.5 2		19 1.02	4 0.96	1 0.66	1 0.75	1 0.44	1 0.71	*0 1.7	1 0.79	*0 0.0	*0 0.5
81 83.1 0.97	1.5 7		31 1.05	8 0.96	7 1.17	7 1.17	7 0.78	5 0.74	2 0.86	6 1.00	3 0.72	5 1.03
88050100 KILKHAMPTON												
30 30.2 0.99	0.5 2		17 1.03	2 1.17	3 1.00	3 1.56	*0 0.5	*0 2.7	3 1.72	*0 0.3	2 1.50	*0 0.5
76 69.5 1.09	11.5 8		11 0.96	5 1.19	7 1.16	6 0.71	7 1.08	4 0.63	6 0.70	8 1.33	10 1.88	12 1.79
88090100 COOMBE												
31 30.9 1.00	0.9 2		15 1.03	4 1.15	4 1.26	*0 0.0	3 1.11	2 0.72	*0 1.8	1 1.79	2 1.28	*0 0.4
73 76.0 0.96	2.0 7		9 1.05	9 1.04	6 1.30	10 1.01	4 0.90	7 0.71	8 1.08	4 0.74	10 1.07	6 0.77
33720100 NAB END												
27 24.8 1.09	0.3 2		14 1.03	2 1.21	3 1.34	2 1.04	1 1.95	2 1.12	2 2.89	*0 0.7	*0 1.0	1 1.31
72 55.4 1.30	8.1 6		11 1.05	7 1.02	9 1.30	5 1.14	4 1.47	5 1.05	7 1.51	10 2.29	6 1.20	8 1.52
33760100 ARNCLIFFE												
29 25.2 1.15	1.0 2		14 1.03	2 1.22	3 1.36	2 1.01	1 1.87	3 1.65	1 0.99	1 1.93	*0 1.1	2 2.37
85 56.4 1.51	28.8 7 ***		10 1.05	10 1.17	8 1.32	5 1.12	2 0.90	10 1.89	13 2.18	7 1.74	6 1.24	14 2.57
33910100 SEATY HILL												
29 27.6 1.05	1.8 2		13 0.95	3 0.88	1 0.67	2 1.00	1 0.91	3 1.67	3 1.75	2 2.11	*0 0.5	1 1.11
92 62.0 1.48	34.1 7 ***		11 1.06	3 0.89	5 0.75	7 1.15	8 1.31	11 1.56	11 1.89	8 1.34	12 2.48	16 2.78
33950100 GORDALE BRIDGE												
25 27.3 0.91	0.2 2		13 0.95	4 1.18	1 0.67	1 0.73	1 0.59	2 1.15	*0 1.1	2 1.29	*0 0.4	1 1.02
63 61.5 1.02	1.8 7		11 1.06	3 0.89	9 1.01	4 1.01	6 0.91	8 1.31	6 1.14	8 1.25	4 0.80	4 0.72
89050100 DALNESSIE												
21 23.7 0.89	1.6 2		12 1.04	1 0.57	3 1.36	1 0.74	1 1.80	1 0.55	2 1.20	*0 1.2	*0 0.7	*0 0.8
53 54.8 0.97	3.2 6		11 1.08	5 1.17	7 1.31	3 0.93	4 1.02	6 1.02	7 0.89	3 0.70	5 1.25	2 0.35

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
89090100 U/S BALNACoil											
33 25.6 1.29	5.0 2	12 1.04	3 1.15	4 1.32	1 0.77	3 1.35	1 1.09	3 1.75	1 2.00	4 3.29	1 1.77
77 58.7 1.31	9.1 7	10 1.06	10 1.17	9 1.33	7 1.20	6 1.10	3 1.27	3 0.60	9 2.37	10 1.86	10 1.64
89130100 D/S LOCH BRORA											
27 28.2 0.96	1.2 3	12 1.02	7 1.17	2 0.68	*0 0.0	3 1.36	1 0.55	1 1.34	1 0.64	*0 0.6	*0 0.6
64 66.1 0.97	1.1 7	14 0.97	10 1.17	8 1.07	2 0.51	5 0.90	3 0.83	6 1.01	6 1.12	4 0.71	6 1.05
89210100 CREAG DHUBH											
23 23.5 0.98	0.9 2	12 1.04	2 1.14	3 1.37	1 0.73	1 1.87	2 1.11	1 0.75	1 0.70	*0 0.7	*0 0.8
49 54.3 0.90	2.4 6	11 1.08	5 0.99	3 0.66	4 1.25	4 1.18	5 0.85	6 0.81	4 0.79	4 0.99	3 0.54
89250100 POLLIE											
25 24.6 1.02	1.8 2	12 1.04	3 1.16	3 1.37	2 1.52	1 1.92	2 0.75	2 1.81	*0 1.0	*0 1.0	*0 0.6
56 56.7 0.99	9.0 6	9 1.07	10 1.16	5 1.13	8 1.56	6 1.22	5 1.13	6 1.11	6 1.17	1 0.25	*0 6.3
90090100 D/S LOCH STACK											
30 28.6 1.05	1.1 2	15 1.04	4 1.18	4 1.36	*0 0.0	3 1.32	2 1.06	*0 0.8	2 1.22	*0 0.5	*0 0.7
66 67.5 0.98	4.2 7	17 0.99	9 1.08	5 0.98	4 0.89	6 1.19	5 1.11	7 1.28	7 1.30	3 0.54	3 0.47
91050100 LITTLE DRIFIE											
24 29.2 0.82	1.2 2	10 0.93	2 0.41	4 0.75	1 0.79	1 0.94	2 0.92	*0 0.4	1 0.53	*0 0.7	3 3.79
48 69.6 0.69	11.5 9	5 0.86	6 0.65	6 0.89	7 0.83	2 0.33	3 0.42	2 0.34	3 0.54	6 0.72	8 1.24
91090100 WANSFORD											
29 33.0 0.88	3.0 3	13 0.96	5 1.00	2 0.85	4 1.21	3 1.10	1 0.37	1 0.95	*0 0.5	*0 1.0	*0 0.8
79 81.7 0.97	6.4 9	9 0.95	11 1.08	5 0.74	7 1.19	13 1.17	4 0.76	10 1.20	9 1.34	9 0.82	2 0.29
91130100 CORPSLANDING											
31 31.7 0.98	1.8 2	15 1.03	6 1.19	1 1.28	3 1.54	3 0.69	2 1.55	*0 1.1	1 0.99	*0 0.6	*0 0.9
75 80.1 0.94	8.4 7	10 1.07	17 1.11	6 0.89	6 1.49	3 0.56	14 1.36	4 0.86	9 0.93	5 0.67	1 0.14
91210100 HARPAM											
28 30.8 0.91	2.6 3	11 1.02	4 0.94	2 1.40	5 0.88	4 1.44	*0 2.3	1 0.73	1 1.04	*0 0.5	*0 0.8
73 75.0 0.97	5.7 7	10 0.96	4 0.93	5 0.73	11 1.28	8 1.64	8 1.10	6 1.01	5 0.52	10 1.09	6 0.75
92050100 GREEN CASTLE											
23 26.6 0.86	1.1 2	13 0.96	1 0.57	3 1.32	*0 2.5	2 0.95	1 0.74	1 1.55	*0 0.9	1 1.51	1 1.26
49 59.7 0.82	9.3 6	11 0.97	4 0.79	3 0.50	2 0.63	4 0.52	3 0.67	4 0.64	4 0.74	4 0.85	10 1.82
49710100 CRANSHAWs											
31 30.1 1.03	0.1 3	14 1.02	5 1.20	1 0.64	5 1.32	1 0.62	1 0.58	2 1.80	2 1.71	*0 0.7	*0 0.5
63 68.9 0.91	9.5 8	13 1.05	8 1.18	12 1.16	6 0.86	7 1.28	5 0.86	5 1.04	4 1.15	3 0.48	*0 6.6
49750100 PRESTON HAUGH											
34 30.8 1.10	1.0 2	13 1.03	4 1.17	5 1.12	7 1.50	1 0.89	3 2.27	*0 0.7	1 1.02	*0 0.9	*0 0.5
69 70.5 0.98	8.0 7	16 1.06	10 1.07	7 1.05	10 1.20	5 1.51	7 1.23	3 0.66	7 1.27	4 0.66	*0 5.9
49790100 U/S ALLANTON											
31 31.4 0.99	1.0 3	13 0.95	4 0.80	3 0.80	4 1.03	1 0.86	1 2.15	*0 0.6	3 1.89	1 1.21	1 2.65
73 71.6 1.02	3.8 7	16 1.00	9 0.82	4 1.08	8 1.01	6 1.00	5 0.94	7 2.14	6 0.86	4 0.66	8 1.51
49830100 CHESTERFIELD F											
37 32.0 1.16	1.3 2	16 1.03	3 1.15	7 1.32	4 1.03	2 1.75	*0 0.0	3 3.06	1 0.80	1 1.34	*0 0.5
83 73.0 1.14	4.1 7	16 1.06	14 1.09	6 1.33	6 1.04	7 0.96	9 1.39	5 1.33	8 1.42	8 1.35	4 0.70
49870100 HALLIBURTON BR											
33 31.1 1.06	0.8 3	11 0.93	5 1.16	3 0.79	4 1.52	3 1.10	2 0.90	1 0.89	*0 0.5	3 1.93	1 2.41
71 72.7 0.98	0.8 8	10 0.96	8 1.17	6 0.87	10 0.97	3 0.80	8 0.89	6 1.15	5 0.88	8 1.08	7 0.95
49910100 FOGO											
34 31.6 1.08	0.9 3	13 1.02	6 1.19	5 1.30	5 1.25	2 1.17	*0 0.5	1 0.78	2 1.58	*0 0.7	*0 0.5
75 72.6 1.03	4.3 7	13 1.05	12 0.94	6 1.15	8 1.03	7 1.41	9 1.52	5 1.19	7 1.06	3 0.46	5 0.80
49950100 BLACKADDER WAT											
29 31.8 0.91	0.3 2	14 0.90	3 1.16	3 0.66	5 1.10	1 0.90	*0 0.0	1 2.89	2 1.08	*0 0.8	*0 0.5
69 72.8 0.95	2.3 7	13 0.86	12 0.94	3 0.79	6 1.03	11 1.33	4 0.79	4 0.87	7 1.16	5 0.85	4 0.75
62850100 LINGHILLS FARM											
35 32.6 1.07	1.8 2	18 1.03	5 1.18	*0 1.5	2 0.76	3 1.37	2 2.11	2 1.87	1 1.32	1 0.72	1 2.43
99 80.6 1.23	18.7 9 *	16 0.99	10 1.06	7 1.04	7 0.97	8 1.13	12 1.91	9 1.36	6 0.85	9 1.16	15 2.39
62890100 DIDDLINGTON LOD											
42 32.8 1.28	7.5 2 *	18 1.03	5 1.18	2 1.31	3 1.13	4 1.83	3 2.21	1 1.02	2 4.08	3 2.04	1 2.27
107 80.9 1.32	23.0 9 **	17 1.06	9 0.95	7 1.03	8 1.10	7 1.07	9 1.33	9 1.35	10 1.38	17 2.17	14 2.23
62930100 FIVE MILE HOUS											
35 31.5 1.11	1.0 2	20 1.01	1 1.19	4 1.31	1 1.46	1 0.92	3 1.09	2 1.98	2 2.89	1 1.28	*0 0.8
96 87.3 1.10	3.3 9	19 1.04	10 0.98	8 1.05	9 1.18	12 1.23	8 1.60	9 1.24	8 0.87	6 0.95	7 1.16

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
94810100 MERRIVALE											
27 32.6 0.83	1.5 2	14 0.95	6 0.77	1 1.30	*0 1.2	1 1.70	2 0.87	2 0.57	1 1.84	*0 0.7	*0 0.3
59 78.1 0.76	12.2 7	12 0.97	8 0.71	10 0.90	3 0.43	2 0.45	2 0.24	3 0.43	8 1.27	7 1.04	4 1.12
94850100 GRENOFEN											
33 32.6 1.01	0.7 2	18 0.97	5 1.20	2 1.34	2 1.50	3 1.33	1 0.71	1 0.60	1 0.80	*0 0.0	*0 0.4
76 82.9 0.92	4.6 7	31 1.01	8 1.07	6 1.00	7 1.17	6 0.86	8 0.91	3 1.29	2 0.33	3 0.72	2 0.43
95810100 ALPORT											
30 30.8 0.98	0.2 3	9 1.02	6 1.01	2 0.86	5 0.85	2 0.92	3 1.29	*0 1.4	1 1.11	*0 0.5	2 3.20
67 76.3 0.88	7.7 8	8 0.94	5 0.73	6 0.67	4 0.62	7 0.83	8 0.89	5 1.03	7 0.90	5 0.59	12 1.71
95850100 CONGREAVE											
29 32.3 0.90	1.3 3	10 0.94	5 0.99	5 1.11	4 1.02	3 0.91	1 0.79	*0 1.4	1 1.48	*0 0.9	*0 0.6
63 79.2 0.80	10.3 9	9 0.95	5 0.65	4 0.67	9 1.14	7 0.70	6 0.77	4 0.57	10 1.49	3 0.33	6 0.79
96030100 CARSHOPE											
30 25.5 1.18	1.5 2	14 1.03	2 1.22	3 1.35	3 1.51	1 1.87	2 1.08	2 1.49	1 2.11	1 0.89	1 1.49
58 57.0 1.02	4.4 6	12 1.06	9 1.18	6 1.12	5 1.11	2 0.61	3 0.67	5 0.78	7 1.76	6 1.20	3 0.59
96070100 LINSHIELDS											
28 25.8 1.08	0.5 2	13 1.03	1 1.20	6 1.35	1 1.66	2 0.92	1 0.73	2 1.12	*0 0.7	*0 0.5	2 2.72
58 57.8 1.00	3.7 6	12 1.05	10 1.16	7 1.34	4 1.04	7 1.30	5 1.01	5 1.10	3 0.84	2 0.41	3 0.55
96110100 SHARPERTON											
33 28.9 1.14	1.8 2	12 1.02	3 1.16	3 1.34	8 1.58	5 1.46	1 1.02	*0 0.3	1 0.80	*0 0.5	*0 0.8
72 65.4 1.10	9.1 7	13 1.05	10 1.17	9 1.20	8 1.38	9 1.60	5 1.22	7 1.42	6 1.27	1 0.17	4 0.68
96150100 PAUPERHAUGH											
39 30.9 1.26	4.4 2	14 1.03	5 1.22	4 1.07	5 1.52	4 1.74	1 2.37	1 1.01	4 3.21	1 1.22	*0 0.4
86 70.6 1.22	5.1 6	16 1.06	10 1.06	6 1.31	10 1.08	6 1.52	7 1.19	8 1.85	7 1.12	7 1.17	9 1.52
01810100 BRADFORD											
43 32.5 1.32	10.2 2 **	17 1.03	7 1.16	1 1.32	1 1.54	1 0.87	4 1.75	6 1.71	1 1.78	4 5.49	1 3.14
106 77.3 1.37	32.0 8 ***	15 1.06	11 1.17	12 1.17	4 0.79	10 1.40	10 1.30	7 1.19	10 1.32	13 2.49	14 2.87
01850100 KEYBRIDGE											
30 32.6 0.92	0.3 2	18 0.97	4 0.96	1 0.67	1 0.79	2 0.92	2 1.50	*0 1.7	2 1.54	*0 0.1	*0 0.5
63 81.8 0.77	8.6 8	21 0.99	12 0.88	3 0.40	4 0.61	6 0.83	5 0.84	1 0.19	4 0.74	5 1.09	2 0.43
33810100 HUBBERHOLME											
30 28.3 1.06	0.1 2	13 1.02	2 1.24	3 0.78	4 1.54	2 0.91	3 1.30	*0 0.8	1 1.34	2 2.57	*0 0.8
61 64.5 0.95	1.7 7	14 0.93	6 1.02	6 1.00	4 0.70	7 0.91	3 0.81	3 0.72	4 0.79	6 1.20	8 1.30
33850100 GRASSINGTON											
32 29.4 1.09	0.3 2	13 1.03	3 1.16	3 1.38	6 1.17	3 1.05	2 2.05	*0 0.4	*0 1.3	*0 0.5	2 2.23
67 67.2 1.00	1.4 7	12 0.90	11 1.07	9 1.35	7 0.99	6 1.34	2 0.51	6 1.18	3 0.69	5 0.78	6 1.07
33890100 ADDINGHAM											
26 30.9 0.84	1.0 2	12 0.89	1 0.58	5 1.30	3 0.65	*0 2.3	1 0.77	2 1.81	1 0.94	1 1.00	*0 0.5
67 72.0 0.93	2.7 8	13 1.05	10 0.95	10 1.11	4 0.62	4 0.80	6 1.51	4 0.73	6 1.00	6 0.90	4 0.62
33930100 OTLEY											
33 32.0 1.03	0.1 2	12 0.95	5 1.16	5 1.31	3 0.94	1 0.58	3 0.92	1 1.46	1 0.85	2 2.01	*0 0.3
88 76.4 1.15	9.4 8	13 1.06	8 0.94	9 1.00	6 1.02	8 1.12	6 0.74	6 1.46	8 1.01	15 2.02	9 1.48
33970100 WETHERBY											
35 33.0 1.06	0.4 2	15 1.03	4 1.19	5 1.09	5 1.31	*0 2.2	1 2.09	3 1.68	2 1.35	*0 0.6	*0 0.1
78 77.6 1.01	4.2 8	15 1.07	6 0.72	10 1.02	9 1.23	8 1.23	9 1.18	2 0.63	11 1.34	5 0.77	3 0.50
58870100 WOLF'S CASTLE											
40 39.1 1.02	0.1 2	29 1.04	3 1.19	1 1.36	2 0.78	4 1.44	*0 0.0	*0 0.4	1 0.83	*0 0.3	*0 0.6
98 104.9 0.93	12.9 9	25 1.01	14 1.03	20 1.35	12 1.22	8 1.45	6 0.69	5 0.80	4 0.46	2 0.32	2 0.32
58910100 TREFFGARNE											
39 39.4 0.99	1.3 2	29 1.03	3 1.17	1 1.33	3 1.15	2 0.70	*0 0.0	1 2.69	*0 1.2	*0 0.3	*0 0.6
97 106.3 0.91	7.9 9	29 1.05	15 1.19	16 1.13	7 0.66	8 1.07	4 0.68	7 1.09	4 0.45	4 0.63	3 0.47
58950100 CROW HILL											
40 39.7 1.01	0.2 1	29 1.03	3 1.16	1 1.30	2 0.61	4 1.73	*0 0.0	*0 0.7	*0 0.9	1 3.25	*0 0.6
89 107.5 0.83	13.0 9	29 1.04	12 0.95	10 0.73	13 1.08	7 0.99	4 0.68	6 0.78	2 0.26	6 0.92	*0 6.5
69810100 OLIVER'S BATTE											
33 29.5 1.12	0.7 2	15 1.04	3 1.12	3 1.32	4 1.27	2 0.63	2 1.21	*0 0.0	*0 0.6	4 3.67	*0 0.4
79 71.7 1.10	6.6 9	10 1.04	10 0.95	9 1.17	5 0.85	6 0.92	3 0.52	9 1.27	10 1.57	9 1.25	8 1.59
69850100 SHERFIELD ON L											
35 36.7 0.95	2.1 3	16 1.03	8 1.18	4 0.91	4 1.22	1 0.61	1 0.56	*0 1.5	*0 0.5	1 1.12	*0 0.4
98 90.2 1.09	4.4 9	13 1.06	12 1.10	14 1.27	13 1.23	10 1.31	8 1.00	6 1.11	10 1.12	9 1.02	3 0.45

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI	SQ			90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG			OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
69930100 BRIMPTON																
33	35.5	0.93	3.1	3			12 0.89	6 1.18	4 1.04	3 0.56	1 0.37	3 1.58	*0 0.4	2 1.68	2 1.74	*0 0.4
77	86.6	0.89	3.7	9			7 1.04	9 0.70	9 1.21	8 0.68	7 1.05	4 0.75	7 0.77	10 0.89	9 1.06	7 1.02
97030100 GLASSCOCH BRIDG																
26	23.1	1.12	3.1	2			10 0.93	3 1.13	1 0.70	1 0.49	1 2.00	*0 1.4	*0 1.1	3 2.37	4 3.27	3 3.86
53	53.8	0.99	13.5	6 *			7 0.83	8 1.17	5 1.34	2 0.62	2 0.41	3 0.74	2 0.26	8 1.57	4 1.02	12 2.01
97110100 SPITTAL																
28	29.7	0.94	1.2	2			11 0.94	3 1.16	4 0.90	1 0.30	5 1.55	1 0.57	*0 0.0	2 2.12	*0 1.2	1 1.59
56	69.6	0.81	7.2	7			12 1.06	11 1.08	5 1.10	4 0.60	4 0.61	5 0.80	4 1.05	2 0.31	5 0.76	4 0.56
99030100 CLUNY VILLA																
36	28.8	1.25	3.9	2			14 1.03	2 1.21	3 1.29	4 1.45	2 0.95	4 2.23	3 2.12	2 1.14	2 2.36	*0 0.5
72	67.0	1.07	5.5	8			10 0.97	4 1.20	8 1.18	8 1.52	10 1.32	7 0.94	9 1.45	6 1.09	4 0.56	6 0.80
00070100 ABERGWYNREGYN																
27	29.4	0.92	1.5	2			14 0.90	3 1.19	1 1.27	2 1.53	2 1.18	3 0.82	1 0.92	1 0.84	*0 1.0	*0 0.6
60	68.6	0.87	7.5	7			12 0.98	7 1.19	10 1.11	6 1.16	4 0.82	3 0.56	9 1.20	5 0.67	3 0.62	1 0.16
AN090100 GOULCEBY																
27	29.2	0.92	1.9	2			11 1.01	3 0.89	2 1.33	5 1.29	2 0.40	2 2.12	1 0.74	*0 1.1	*0 0.5	1 1.29
69	70.7	0.98	8.0	8			12 1.05	5 1.16	5 0.83	6 0.93	8 1.12	6 1.19	13 1.58	7 1.00	5 0.62	2 0.29
AN020100 THUNDERBRIDGE																
41	32.5	1.26	4.8	3			13 1.03	3 0.87	6 1.34	3 1.15	6 1.55	3 1.36	1 0.98	2 2.65	2 2.12	2 3.31
98	80.1	1.22	11.3	9			8 1.05	10 1.04	4 0.66	10 1.16	9 1.23	11 1.41	9 1.01	9 1.34	14 1.37	14 1.95
AN030100 HALLARDS FEN R																
36	31.5	1.14	1.7	2			20 1.01	1 1.18	4 1.30	1 1.44	2 1.86	5 1.81	2 2.00	1 1.44	*0 0.8	*0 0.7
89	87.6	1.02	4.6	9			21 1.04	8 0.95	8 1.04	6 0.63	10 1.24	8 1.58	11 1.23	8 1.16	5 0.79	4 0.71
AN040100 ETERNITY HALL																
30	31.5	0.95	1.0	2			19 0.96	1 1.18	3 0.98	1 1.44	2 1.86	3 1.08	*0 1.0	*0 0.7	*0 0.8	1 1.44
56	87.6	0.64	15.5	9			17 0.84	8 0.95	6 0.78	3 0.31	5 0.62	3 0.59	3 0.31	5 0.72	3 0.48	3 0.53
AN050100 HORSEWAYS CORN																
31	31.5	0.99	0.2	2			20 1.01	1 1.18	4 1.30	1 1.44	*0 1.1	2 0.72	*0 1.0	1 1.44	1 1.30	1 1.44
72	87.6	0.82	7.9	9			20 0.99	9 1.06	8 1.04	6 0.63	9 1.11	3 0.59	7 0.72	2 0.29	4 0.63	4 0.71
AN060100 BULLY HILLS																
25	28.8	0.87	0.8	2			11 1.02	1 0.39	3 1.35	3 0.65	3 0.92	1 0.56	2 1.33	*0 0.5	1 1.01	*0 0.6
60	69.6	0.86	7.2	7			10 1.06	5 0.97	5 0.74	2 0.44	12 1.28	5 0.69	2 0.41	8 1.18	8 0.96	3 0.42
AN070100 KIRMOND LE MIR																
27	28.7	0.94	0.9	2			11 1.01	2 0.79	3 0.99	1 0.32	5 1.15	2 1.38	*0 0.7	3 2.42	*0 0.8	*0 0.7
53	69.7	0.76	5.6	8			11 0.96	2 0.47	4 0.76	6 0.93	5 0.69	5 0.98	7 0.86	6 0.79	3 0.44	4 0.55
AN080100 BISCATHORPE																
34	29.7	1.14	0.9	3			11 1.02	4 1.18	4 1.37	2 0.99	5 1.27	3 1.13	3 2.19	1 0.76	1 2.05	*0 0.8
81	73.7	1.10	6.5	8			11 1.06	5 1.17	8 1.33	9 1.23	8 1.22	5 0.85	15 1.54	8 1.20	8 0.85	4 0.54
NH010100 ETAL																
35	31.2	1.12	1.1	2			14 1.03	5 1.00	4 1.08	4 1.24	3 1.69	1 2.20	1 2.97	3 1.59	*0 0.8	*0 0.4
89	71.2	1.25	10.5	6			16 1.06	13 1.10	3 0.82	9 1.14	5 1.27	11 1.52	5 1.68	13 1.87	9 1.48	5 0.90
NH020100 CHATTON																
27	31.9	0.85	1.1	2			11 0.76	2 0.80	3 0.78	5 1.28	3 1.07	1 2.20	*0 1.5	2 1.46	*0 0.7	*0 0.4
69	75.3	0.92	4.1	8			12 0.91	6 0.70	7 0.78	6 1.16	4 0.67	7 0.75	3 0.77	6 0.99	9 1.17	9 1.39
NH030100 EWART																
28	30.9	0.91	2.4	2			13 1.03	2 0.79	6 0.98	5 1.26	2 1.22	*0 0.4	*0 0.8	*0 1.8	*0 0.6	*0 0.4
61	70.5	0.87	5.2	7			13 1.06	12 1.08	6 1.12	7 0.76	2 0.59	7 1.12	3 0.71	4 0.59	5 0.86	2 0.33
NH040100 ROTHILL																
28	28.6	0.98	0.4	2			10 1.01	7 0.91	2 0.92	1 1.49	3 1.75	2 0.86	1 1.01	2 1.11	*0 0.9	*0 0.5
67	66.9	1.00	6.6	8			7 1.06	2 0.39	7 0.92	10 1.13	4 0.90	7 1.07	5 0.67	9 1.69	10 1.36	6 0.79
NH050100 FRAMLINGTON GA																
27	28.0	0.96	0.6	2			15 1.03	4 1.17	1 0.67	3 1.15	*0 0.0	1 0.39	2 2.87	*0 0.8	1 1.17	*0 1.0
66	63.0	1.05	6.7	8			11 1.06	4 1.18	10 1.12	6 0.93	6 1.19	7 1.07	5 0.89	8 1.43	8 1.50	1 0.18
NH060100 LODGE WOOD																
29	28.7	1.01	0.6	2			15 0.96	1 1.20	5 1.09	1 1.64	2 1.79	2 1.15	1 0.57	*0 0.5	2 1.42	*0 0.5
68	65.2	1.04	3.2	7			11 0.97	2 0.79	7 0.78	7 1.00	10 1.53	6 0.98	5 0.97	5 0.76	9 2.02	6 0.92
NH070100 U/S BALDERHEAD																
21	23.9	0.88	0.5	2			13 0.96	2 0.80	2 1.35	*0 1.2	*0 0.5	2 1.10	1 1.35	1 3.83	*0 1.2	*0 0.7
53	53.4	0.99	1.9	5			10 0.88	6 0.78	8 1.31	4 1.06	1 0.46	4 0.89	6 1.14	5 1.38	5 1.24	4 0.83

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ		90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF	SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
NH090100 CORONATION WOO														
28	26.7	1.05	1.9	2	14	1.03	4	1.20	1	1.39	3	1.55	2	1.86
55	60.5	0.91	3.0	7	9	1.06	4	0.77	7	1.17	9	1.14	4	0.84
NW010100 OLD TEBAY														
32	28.3	1.13	1.5	2	12	1.02	4	1.16	1	1.36	7	1.56	4	0.90
65	64.1	1.01	3.4	7	15	1.05	10	1.08	5	0.95	9	1.26	8	1.21
NW020100 RIGMADEN														
28	28.9	0.97	0.2	2	13	1.03	3	1.15	3	1.04	3	0.79	4	1.40
58	65.7	0.88	8.5	7	18	1.05	7	1.17	11	1.14	5	0.87	3	0.78
NW030100 FORGE WEAR														
33	31.3	1.05	0.6	2	13	0.96	4	1.19	8	1.34	2	1.03	2	0.92
69	72.0	0.96	3.3	8	15	0.89	8	1.05	9	1.11	7	0.91	3	0.92
NW040100 TEMPLE SOWERBY														
35	31.6	1.11	0.5	2	14	1.04	4	1.18	6	1.14	3	1.52	3	1.05
81	73.4	1.10	6.2	8	14	1.06	12	1.17	7	0.94	10	1.52	9	1.38
NW050100 APPLEBY														
32	31.2	1.03	0.4	2	14	1.03	3	1.18	5	0.94	4	1.52	3	1.07
73	72.2	1.01	3.6	8	15	1.06	10	1.16	5	0.82	10	1.09	4	0.90
NW060100 WARWICK BRIDGE														
32	31.9	1.00	1.6	2	14	1.03	5	1.17	6	1.14	4	1.24	1	0.89
77	73.3	1.05	8.6	7	14	1.06	13	1.16	12	1.34	8	1.15	5	1.04
NW070100 WAVER BRIDGE														
33	31.8	1.04	0.2	3	13	1.02	6	1.17	5	1.12	4	1.02	3	1.76
74	73.7	1.00	1.6	8	11	1.05	14	1.09	6	0.98	7	1.20	10	1.14
ST010100 LLANDINAM														
27	31.8	0.85	2.5	3	12	1.02	4	0.78	4	0.75	1	0.80	4	1.46
56	74.7	0.75	8.4	8	19	1.00	9	0.88	4	0.75	4	0.69	4	0.65
ST020100 ISLE OF BICTON														
28	34.2	0.82	3.0	3	12	0.95	7	1.16	3	0.58	2	0.75	1	0.36
52	80.4	0.65	16.1	9	9	0.79	11	0.81	8	0.84	4	0.61	5	0.83
ST030100 SHUGBOROUGH														
31	29.0	1.07	6.2	2 *	15	1.03	1	0.40	2	0.87	1	0.52	1	0.47
64	67.1	0.95	16.7	9	8	0.95	6	1.15	7	1.17	4	0.55	4	0.55
ST040100 NEWTON LINFORD														
34	31.1	1.09	0.4	3	9	1.01	7	1.16	3	1.03	6	1.31	3	0.92
77	75.0	1.03	9.7	8	7	1.05	6	0.99	13	1.24	5	1.26	13	1.48
ST050100 BASLOW														
34	33.1	1.03	0.6	3	14	1.02	8	1.18	4	1.08	4	1.55	*0	1.1
82	80.5	1.02	1.2	8	17	1.05	14	1.18	6	0.89	12	1.14	6	1.22
ST060100 CROMFORD MEADO														
34	31.8	1.07	0.6	3	14	1.04	4	0.95	4	1.08	3	1.15	4	1.49
81	75.7	1.07	6.5	7	16	1.07	7	1.02	8	0.98	10	1.19	4	1.08
ST070100 ASHFORD														
31	32.1	0.97	0.7	3	12	1.03	5	0.96	4	1.08	3	0.80	1	0.46
68	78.6	0.87	3.9	8	13	1.05	8	1.16	10	0.95	3	0.67	10	0.93
SN010100 DITTON														
24	29.8	0.81	1.8	3	11	1.02	1	0.39	5	0.98	1	0.54	2	0.61
62	72.8	0.85	5.7	9	8	1.05	7	1.01	6	0.82	7	1.22	7	1.15
SN020100 ROAD BRIDGE														
30	30.3	0.99	2.9	3	10	0.94	3	0.68	1	0.43	4	1.00	2	0.87
65	74.0	0.88	11.2	8	7	1.05	6	0.64	2	0.30	8	1.55	4	0.81
SW010100 BODILLY BRIDGE														
28	32.5	0.86	2.7	2	16	1.00	8	1.20	*0	0.0	1	0.30	1	1.98
64	70.8	0.90	11.3	6	8	1.00	23	1.15	*0	0.0	10	1.37	6	1.18
SW020100 SKIMMEL BRIDGE														
26	32.5	0.80	2.2	2	15	0.94	7	1.05	*0	0.0	*0	3.3	1	1.98
56	70.9	0.79	10.2	6	7	0.88	20	1.00	*0	0.0	8	1.09	7	1.37
SW040100 POLTESCO BRIDG														
39	29.4	1.33	11.1	2 **	15	0.97	2	1.16	5	1.30	*0	0.6	2	1.77
88	71.0	1.24	23.9	9 **	11	1.05	3	0.50	8	1.19	8	1.21	6	0.72

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ	90-100 80-89.9 70-79.9 60-69.9 50-59.9 40-49.9 30-39.9 20-29.9 10-19.9 0- 9.9															
OBS	EXP	O/E	DF SIG	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E
SW050100 SEARAUGH MOOR																			
26	32.5	0.80	2.3 2	15	0.95	5	0.84	2	1.34	1	0.52	*0	1.1	2	0.89	*0	1.7	1	0.77
51	72.8	0.70	11.3 7	7	0.89	15	0.94	7	1.18	2	0.60	5	0.68	6	0.69	4	0.57	2	0.39
SW060100 TRYTHOGGA																			
31	32.5	0.96	0.2 2	16	1.00	8	1.21	*0	0.0	*0	3.3	1	1.96	1	0.52	3	1.13	1	2.45
67	71.2	0.94	3.7 5	8	1.01	18	1.03	2	0.84	6	0.83	4	0.85	3	0.52	10	0.77	*0	0.4
SW070100 METHER-UNY-MIL																			
32	32.5	0.98	0.2 2	16	1.00	8	1.20	*0	0.0	2	0.61	1	1.97	1	0.51	4	1.50	*0	0.0
67	71.1	0.94	4.1 6	8	1.00	22	1.10	*0	0.0	10	1.37	5	0.97	3	0.56	11	0.84	*0	0.0
SW080100 POLKANOGGO																			
33	33.0	1.00	0.1 3	16	1.04	5	0.98	2	0.90	2	1.56	2	0.61	3	1.28	*0	1.4	1	1.38
64	83.2	0.77	12.9 9	10	1.06	11	1.18	10	1.21	5	0.93	5	0.50	3	0.33	6	0.77	6	0.72
SW090100 PORTHOUSTOCK B																			
34	29.5	1.15	2.3 2	12	1.02	8	1.04	2	1.30	*0	0.7	2	1.21	*0	1.3	4	1.87	2	1.50
72	71.0	1.01	5.8 8	6	0.90	8	0.93	10	1.11	7	1.19	4	0.55	4	0.88	7	1.17	7	0.76
TH010100 U/S ALDERSHOT																			
46	35.1	1.31	8.5 2 *	17	1.02	7	1.16	4	1.32	2	1.55	5	1.54	2	2.20	4	2.42	3	2.87
114	86.0	1.33	16.7 8 *	17	1.06	13	1.02	12	1.35	4	0.90	9	1.67	14	1.37	15	2.00	10	1.67
TH020100 BAGNOR																			
42	36.3	1.16	2.3 3	18	1.04	6	1.02	2	1.33	7	1.51	3	1.80	2	0.76	1	1.47	1	1.31
112	89.6	1.25	16.8 9	13	1.05	14	1.11	12	1.23	14	1.36	10	1.14	9	1.45	9	1.64	11	1.16
TH030100 DEANLANDS FARM																			
33	33.3	0.99	0.4 3	15	1.04	3	1.20	4	1.05	3	0.91	4	1.00	1	1.08	3	1.33	*0	0.5
70	82.0	0.85	7.0 9	13	1.07	7	1.15	10	1.12	8	0.96	8	1.12	4	0.57	4	0.53	6	0.80
TH040100 FOSSE BRIDGE																			
43	34.9	1.23	3.3 2	14	1.03	4	1.21	10	1.33	2	0.75	4	1.76	5	1.82	1	2.79	3	2.40
118	85.1	1.39	22.5 8 **	14	1.06	6	1.20	13	1.32	17	1.46	8	1.61	6	0.78	12	1.69	21	1.79
TH050100 D/S DICKLER																			
44	36.4	1.21	3.7 3	13	1.03	7	1.02	5	1.29	6	1.15	5	1.74	4	2.34	*0	1.1	1	1.34
104	89.1	1.17	10.5 9	11	1.07	10	0.99	9	0.99	13	1.17	8	1.09	14	1.56	4	0.59	16	1.76
TH060100 U/S BURGHFIELD																			
25	26.3	0.95	0.2 2	8	1.02	2	0.76	2	1.41	6	1.33	2	0.52	*0	0.9	1	0.51	2	1.74
55	61.8	0.89	3.3 8	4	1.03	4	1.19	4	0.91	8	1.24	4	0.75	8	0.85	5	0.94	3	0.49
TH070100 EASNEYE																			
39	32.4	1.20	1.8 3	15	1.03	8	1.20	1	1.37	4	1.56	4	1.47	3	1.67	1	1.40	*0	0.9
100	80.6	1.24	6.1 9	12	1.05	11	1.07	8	1.31	12	1.33	8	1.33	9	1.17	10	1.22	8	1.40
TH080100 U/S R. COLNE																			
39	34.5	1.13	1.4 3	15	1.03	6	1.19	4	1.36	4	1.51	5	1.28	2	0.94	1	1.29	*0	1.0
101	86.3	1.17	6.8 9	12	1.06	11	1.18	11	1.34	10	1.18	16	1.47	8	1.17	10	1.27	11	1.41
WE010100 PONT NEWYDD																			
22	25.8	0.85	3.6 2	14	1.04	2	1.21	1	1.33	1	1.57	3	0.93	*0	0.9	1	0.36	*0	1.1
56	61.1	0.92	3.3 7	10	1.08	9	1.07	2	1.32	8	1.23	5	0.83	6	1.05	3	0.64	6	0.77
WE030100 BRAICHMELYN																			
32	28.3	1.13	0.9 2	16	1.02	5	1.19	1	1.40	2	1.45	2	1.21	1	1.22	2	1.24	2	1.33
68	67.7	1.00	0.5 5	20	1.03	11	1.07	7	0.88	4	1.50	2	0.60	6	1.32	6	1.03	5	1.01
WE040100 PONT MYNACH																			
36	33.8	1.07	0.9 3	15	1.04	4	0.79	5	1.32	4	1.22	4	1.79	*0	0.9	1	1.00	2	1.19
84	83.7	1.00	4.7 9	10	1.05	12	1.09	6	1.00	11	1.06	11	1.35	4	0.55	5	0.79	5	0.64
WE050100 D/S GLYN MORLA																			
25	29.2	0.86	2.1 2	12	1.02	7	1.02	2	1.37	1	0.51	*0	0.5	1	0.54	1	0.69	1	0.46
55	69.2	0.79	13.4 8	6	1.04	12	1.16	3	0.78	10	0.97	3	0.59	4	0.75	9	1.49	5	0.57
CL020100 NETHER WELLWOO																			
32	27.2	1.18	4.9 2	12	0.95	1	1.20	3	0.80	1	0.50	4	1.81	5	1.82	2	1.89	*0	0.0
69	61.5	1.12	6.6 7	12	0.97	9	1.06	2	0.53	5	0.97	12	1.72	6	1.18	6	1.79	6	1.16
CL040100 MAINHOLM FORD																			
27	33.2	0.81	4.8 2	16	1.04	5	1.16	3	0.67	2	0.51	*0	0.6	*0	0.5	1	0.60	*0	1.2
58	77.5	0.75	10.4 8	15	1.00	9	0.76	5	0.74	4	0.61	9	1.02	*0	2.6	7	1.02	3	0.60
CL050100 KEILATOR																			
17	22.6	0.75	3.1 2	11	1.03	3	1.13	*0	1.4	1	0.50	*0	0.5	2	1.39	*0	1.1	*0	1.2
31	52.4	0.59	15.0 6 *	8	0.95	4	0.77	6	1.14	2	0.62	3	0.69	2	0.48	5	0.67	*0	5.2

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
FO010100 KILL CONQUHAR											
24 29.0 0.83	3.3 2	15 1.04	2 0.78	4 1.08	*0 0.0	1 0.62	1 0.53	1 0.55	*0 1.7	*0 0.8	*0 0.5
58 67.8 0.86	9.9 8	8 1.05	9 1.16	6 1.15	11 1.16	5 1.18	6 1.13	3 0.34	2 0.36	5 0.81	3 0.40
FO020100 A917 ROAD BRID											
23 28.6 0.80	1.4 2	14 0.97	1 0.39	2 0.67	1 0.77	1 0.65	*0 1.4	2 1.41	*0 1.2	2 1.45	*0 0.4
50 67.2 0.74	6.2 9	6 0.89	7 0.81	3 0.58	6 0.72	6 0.99	4 0.75	5 0.71	4 0.63	6 0.96	3 0.42
FO030100 PITCRUVIE CAST											
29 28.6 1.02	2.1 2	15 1.03	3 1.19	2 0.87	3 1.60	3 1.77	2 1.44	*0 1.0	*0 1.5	1 0.81	*0 0.5
54 66.3 0.81	9.6 8	9 1.06	6 0.99	5 0.84	6 0.84	8 1.10	7 1.43	6 0.78	2 0.36	4 0.60	1 0.15
HI010100 GLEN FINNAN											
20 23.1 0.87	3.0 2	11 1.03	3 1.13	1 0.69	3 1.46	*0 0.0	1 0.52	1 0.92	*0 1.3	*0 1.2	*0 0.7
43 53.6 0.80	6.8 6	7 0.83	5 0.73	3 0.80	2 0.62	6 1.37	6 1.22	5 0.68	4 0.76	4 1.08	1 0.18
HI020100 DALCRAG											
18 23.3 0.77	2.5 2	11 0.95	1 0.57	2 0.92	1 0.77	1 0.98	*0 1.3	*0 1.0	2 1.22	*0 0.7	*0 0.8
38 54.0 0.70	9.5 6	11 1.08	2 0.47	6 1.14	2 0.63	2 0.60	5 0.86	6 0.85	3 0.55	*0 3.9	1 0.18
HI030100 KILLIN LODGE											
17 23.0 0.74	3.4 2	11 1.03	2 0.75	1 0.69	1 0.50	*0 0.5	1 0.69	*0 1.1	*0 1.2	1 0.92	*0 0.8
36 53.2 0.68	10.5 6	8 0.95	4 0.59	2 0.54	2 0.52	5 1.33	5 1.12	5 0.67	1 0.20	2 0.49	2 0.36
HI040100 CORRIE COILLE											
22 25.5 0.86	2.6 2	11 1.03	3 1.13	3 1.31	2 1.03	1 0.47	2 0.75	*0 0.4	*0 1.0	*0 1.1	*0 0.7
51 57.9 0.88	3.9 6	8 0.95	6 0.78	4 1.03	5 0.93	6 0.74	3 0.80	6 1.16	5 1.57	3 0.45	5 0.87
HI050100 MON											
22 23.2 0.95	0.2 2	11 1.03	2 0.75	1 0.69	2 0.97	*0 0.0	*0 1.9	2 1.43	2 2.00	2 1.46	*0 0.7
42 53.9 0.78	5.2 6	8 1.07	7 0.90	2 0.53	3 0.93	2 0.51	2 0.37	5 0.62	6 1.27	3 0.80	4 0.68
HI060100 CRAIG GHOBHAIR											
22 22.6 0.97	0.1 2	11 1.03	2 0.76	2 1.42	2 1.00	*0 0.0	2 1.03	1 0.92	*0 1.1	1 1.31	1 1.13
46 52.3 0.88	3.6 6	9 1.07	6 1.16	4 0.76	4 1.25	2 0.47	3 0.72	7 0.98	7 1.28	2 0.50	2 0.38
HI070100 SHIEL BRIDGE											
23 28.2 0.82	4.8 2	11 0.87	3 0.69	3 1.00	1 1.46	4 1.85	1 0.56	*0 0.8	*0 1.6	*0 0.5	*0 0.7
50 66.4 0.75	7.1 7	15 0.98	6 0.79	5 0.83	6 1.14	5 0.90	1 0.28	3 0.48	3 0.54	2 0.40	4 0.65
HI080100 STRATHAN											
25 24.1 1.04	0.3 2	12 1.03	2 1.14	4 1.37	*0 0.7	1 1.78	2 0.89	2 1.23	1 0.84	*0 0.7	1 1.28
59 55.9 1.06	2.7 6	11 1.08	5 0.75	4 1.33	6 1.35	3 0.79	8 1.50	10 1.26	4 0.93	2 0.49	6 0.98
HI090100 BRIDGEND											
28 23.7 1.18	3.1 2	12 1.03	2 1.13	2 0.91	1 0.77	1 0.97	2 1.48	3 2.85	4 2.03	1 1.79	*0 0.8
61 54.9 1.11	1.5 6	12 1.08	4 0.96	5 1.11	4 1.25	3 0.89	7 1.18	9 1.27	8 1.37	1 0.27	8 1.34
HI100100 MOY BRIDGE											
25 27.9 0.89	1.3 2	12 1.03	4 0.94	3 0.99	2 1.02	4 1.78	*0 1.7	*0 0.4	*0 1.3	*0 0.8	*0 0.6
57 64.6 0.88	6.1 6	14 1.06	7 0.90	7 0.94	3 1.46	9 1.08	3 0.74	2 0.45	1 0.21	8 1.21	3 0.52
NE010100 CLODDACH											
25 28.1 0.89	1.3 2	15 1.03	4 1.18	1 0.64	2 1.01	*0 1.1	2 1.16	1 0.97	*0 1.7	*0 0.6	*0 0.5
64 65.8 0.97	5.6 7	18 1.05	10 1.19	8 1.33	7 1.15	3 0.92	5 1.20	5 0.95	6 0.99	1 0.23	1 0.20
NE020100 U/S BLACKBURN											
30 30.5 0.98	0.5 2	15 1.03	3 0.91	2 1.30	4 1.22	2 0.90	3 1.40	*0 0.8	1 0.70	*0 0.7	*0 0.5
64 70.0 0.91	5.0 8	13 1.05	6 1.00	9 0.94	9 1.25	4 0.60	2 0.32	7 1.37	2 0.54	7 1.09	5 0.75
NE030100 INVERBERVIE G.											
24 28.9 0.83	4.4 2	12 1.02	3 1.14	3 0.78	3 1.13	2 1.16	1 0.54	*0 1.4	*0 1.3	*0 0.9	*0 0.7
51 65.3 0.78	11.3 8	11 1.06	5 1.17	5 1.10	10 0.95	5 0.81	6 1.05	3 0.57	4 0.71	2 0.30	*0 6.0
NE050100 TEWEL FORD											
25 27.3 0.91	1.7 2	14 1.02	3 0.88	1 0.66	2 1.47	2 1.69	2 1.09	1 0.69	*0 1.6	*0 0.5	*0 0.8
52 61.4 0.85	8.4 7	10 1.05	5 1.17	9 1.20	5 0.94	7 0.99	6 0.87	3 0.85	5 0.74	*0 5.2	2 0.37
NE060100 STONEHAVEN											
30 28.6 1.05	0.1 2	14 1.02	3 1.16	6 1.34	*0 0.6	1 0.89	2 1.13	2 1.46	1 0.80	1 0.96	*0 0.7
65 65.0 1.00	2.9 7	10 1.06	4 1.15	9 1.10	7 1.19	10 1.21	5 1.01	7 1.06	5 0.94	5 0.79	3 0.45
SO010100 CORSOCK											
37 23.2 1.60	25.8 1 ***	13 1.04	3 1.16	3 1.35	*0 0.0	3 1.86	4 1.89	1 3.32	1 4.54	2 2.62	7 8.82
80 51.8 1.55	64.6 5 ***	10 0.89	10 1.18	5 0.95	2 1.65	5 1.13	2 0.51	10 1.91	3 1.10	9 2.01	24 5.01
SO020100 HAUGH OF URR											
36 28.8 1.25	2.9 2	12 1.02	4 1.16	1 1.33	5 1.52	10 1.58	*0 0.5	*0 0.4	2 2.11	1 1.24	1 1.58
72 65.9 1.09	5.2 7	13 1.05	10 1.16	9 1.31	7 1.07	11 1.51	3 0.98	5 1.12	6 1.35	6 0.95	2 0.34

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS	EXP	O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
S0030100 NR. SOUTHWICK													
25	26.8	0.93	1.8 2	13 1.03	3 1.15	3 1.30	3 1.54	*0 1.1	*0 1.4	1 0.55	2 1.31	*0 0.9	*0 0.6
62	60.9	1.02	9.0 7	9 1.06	5 1.15	8 1.18	9 1.24	7 1.43	7 1.45	6 1.08	7 0.96	4 0.70	*0 5.8
TA010100 FORTEVIOT													
31	30.6	1.01	2.4 3	12 1.03	4 1.18	4 0.77	1 0.30	2 1.18	3 2.16	3 1.68	*0 1.0	*0 0.9	2 5.00
68	69.7	0.98	2.4 8	11 1.05	13 1.02	7 1.04	8 1.20	4 0.99	2 0.44	7 1.01	6 0.98	7 1.16	3 0.54
TA020100 WESTER CARDEAN													
32	30.3	1.06	0.2 2	12 1.03	3 1.18	6 1.15	5 1.12	2 1.20	2 1.47	*0 1.1	*0 0.8	2 2.08	*0 0.5
81	68.9	1.18	3.1 8	10 1.05	13 1.08	10 1.23	7 1.20	6 1.10	5 1.61	7 1.07	7 1.05	7 1.34	9 1.39
TA030100 STANNOCHY BRID													
31	27.5	1.13	1.2 2	11 0.94	3 1.19	3 1.33	5 1.50	1 0.36	2 0.90	3 2.68	*0 0.3	1 1.72	2 2.70
70	61.3	1.14	5.2 6	12 1.05	11 1.01	9 1.31	3 0.94	3 0.54	9 1.65	4 1.17	7 1.52	4 0.94	8 1.45
TA040100 U/S TAY CONFLU													
30	26.8	1.12	1.4 2	12 1.02	2 1.19	4 0.89	2 1.00	5 1.55	*0 0.4	2 1.89	1 0.95	2 3.91	*0 0.7
63	59.4	1.06	1.5 6	12 1.05	9 1.17	8 0.95	6 1.04	6 1.36	5 1.23	5 1.31	4 0.86	4 1.05	4 0.75
TA050100 PROSEN BRIDGE													
26	26.2	0.99	0.1 2	11 0.94	3 0.89	3 1.00	2 1.57	2 0.92	1 1.10	1 0.94	*0 1.0	3 2.70	*0 0.5
52	59.1	0.88	5.9 6	11 0.97	8 1.03	9 1.09	6 1.33	5 0.93	4 1.16	3 0.84	2 0.47	3 0.60	1 0.18
TA060100 PITMUIES													
27	30.4	0.89	1.5 2	12 1.02	5 1.18	3 0.67	3 1.15	*0 0.6	2 0.86	1 0.48	*0 0.5	1 0.93	*0 0.7
44	69.6	0.63	14.1 8	9 0.80	5 0.98	6 0.89	7 0.83	4 0.88	3 0.39	1 0.18	4 0.62	3 0.44	2 0.29
TA070100 ELLIOT													
28	29.0	0.97	0.1 2	15 1.04	2 0.78	3 0.80	*0 0.0	2 1.26	3 1.11	1 1.41	1 0.51	1 1.40	*0 0.6
54	68.0	0.79	9.9 7	7 0.92	10 1.17	5 1.13	8 0.84	3 0.70	7 1.14	2 0.28	5 0.78	1 0.16	6 0.79
TA080100 STRAVITHIE													
30	28.1	1.07	1.4 2	15 0.96	1 0.60	4 1.08	*0 0.6	2 1.81	2 1.57	1 0.57	2 2.75	2 2.12	1 1.50
62	63.3	0.98	2.6 6	11 1.06	4 0.95	8 1.07	4 0.68	7 0.90	5 1.11	5 0.82	7 1.17	2 0.41	9 1.48
TW020100 TARTH WATER FO													
28	28.7	0.98	0.8 2	13 1.02	2 0.80	3 0.81	1 0.53	2 0.88	3 1.63	*0 1.1	1 1.26	3 2.58	*0 0.7
52	65.5	0.79	7.3 6	12 0.98	4 0.60	2 0.53	5 0.69	7 0.89	5 1.01	5 0.95	5 1.14	6 0.91	1 0.16
TW030100 A6089 BRIDGE													
26	31.7	0.82	1.3 3	11 0.88	1 0.29	4 1.05	4 0.90	1 0.45	2 0.74	*0 0.0	1 0.59	*0 0.5	2 5.69
50	77.2	0.65	12.6 8	10 0.88	3 0.39	6 0.57	2 0.52	4 0.43	3 0.41	5 0.77	5 0.88	6 0.72	6 0.91
31410100 BATHINGWELL WO													
18	20.8	0.87	2.2 2	10 1.03	*0 0.8	3 1.33	1 0.75	2 1.71	*0 0.8	2 0.75	*0 0.5	*0 1.2	*0 0.2
48	47.1	1.02	1.2 5	8 1.04	2 0.80	4 1.07	2 1.50	6 1.33	8 0.88	3 0.82	6 1.33	7 1.20	2 0.47
31440100 NEWGATE FOOT													
22	20.8	1.06	0.1 2	10 1.03	1 1.20	2 0.89	1 0.75	2 1.71	2 2.40	2 0.75	*0 0.5	1 0.86	1 3.97
51	47.1	1.08	1.8 5	8 1.04	3 1.20	3 0.80	2 1.50	7 1.56	10 1.10	2 0.55	6 1.33	8 1.37	2 0.47
31450100 HALLEYKELD RIG													
18	20.8	0.87	2.2 2	10 1.03	1 1.20	2 0.89	2 1.50	1 0.86	*0 0.8	2 0.75	*0 0.5	*0 1.2	*0 0.2
40	47.1	0.85	7.1 5	8 1.04	3 1.20	4 1.07	1 0.75	7 0.88	5 0.90	4 1.09	6 1.33	2 0.34	*0 4.2
31500100 SNAPER HOUSE													
29	27.6	1.05	0.3 3	10 1.02	6 1.20	2 0.88	4 1.22	1 0.46	2 2.43	1 0.90	2 1.16	*0 1.0	1 2.14
72	64.3	1.12	4.4 8	5 1.04	4 1.18	6 0.81	11 1.31	8 1.13	6 1.19	7 0.98	10 1.49	10 1.34	5 0.73
31510100 REINS WOOD													
20	20.8	0.96	0.5 2	10 1.03	1 1.20	1 0.44	1 0.75	1 0.86	2 2.40	3 1.12	*0 0.5	1 0.86	*0 0.3
38	47.1	0.81	3.3 5	8 1.04	3 1.20	3 0.80	*0 1.3	4 0.67	7 0.92	2 0.55	3 0.67	7 1.20	1 0.24
31520100 YOWGLASS WOOD													
24	22.5	1.07	1.0 2	8 0.91	3 1.20	1 0.67	2 1.01	1 0.92	3 1.19	1 0.76	3 2.35	2 2.73	*0 0.7
55	51.5	1.07	3.5 6	4 1.01	5 1.19	2 0.64	2 0.51	6 1.10	6 0.82	8 1.79	7 1.05	10 1.48	5 0.88
31530100 DALE HEAD													
23	28.9	0.80	2.5 2	14 1.02	3 0.59	*0 2.2	1 0.77	1 1.95	1 0.33	*0 0.3	2 2.02	*0 0.9	1 1.23
51	65.2	0.78	4.6 6	11 1.06	3 0.71	4 0.60	7 0.82	1 0.22	6 0.81	5 0.72	6 1.23	3 0.57	5 0.78
58410100 BREDENBURY													
23	20.8	1.11	1.3 2	9 0.92	1 1.20	2 0.89	2 1.50	1 0.86	2 2.40	3 1.12	2 3.99	1 0.86	*0 0.3
46	47.1	0.98	0.8 5	8 1.04	2 0.80	5 1.33	2 1.50	5 1.11	8 0.88	4 1.09	3 0.67	6 1.03	3 0.70
58440100 DUNHAMPTON FAR													
20	20.8	0.96	0.1 2	10 1.03	1 1.20	2 0.89	1 0.75	1 0.86	1 1.20	2 0.75	1 2.00	1 0.86	*0 0.2
57	47.1	1.21	2.8 5	8 1.04	2 0.80	5 1.33	2 1.50	6 1.33	10 1.10	7 1.91	4 0.89	5 0.86	8 1.88

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS	CHI SQ	90-100	80-89.9	70-79.9	60-69.9	50-59.9	40-49.9	30-39.9	20-29.9	10-19.9	0- 9.9
OBS EXP O/E	DF SIG	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E	OB O/E
58450100 DINMORE MANOR											
19 20.8 0.92	0.4 2	10 1.03	1 1.20	3 1.33	1 0.75	*0 1.2	*0 0.8	2 0.75	*0 0.5	2 1.71	*0 0.3
40 47.1 0.85	4.1 5	8 1.04	2 0.80	4 1.07	*0 1.3	7 1.27	3 0.37	3 0.82	4 0.89	7 1.20	2 0.47
58480100 GLASNANT											
31 30.8 1.01	0.1 2	17 0.96	4 1.15	2 0.93	3 1.22	*0 1.6	1 1.12	1 0.93	*0 0.0	*0 0.6	3 3.33
58 69.7 0.83	4.5 7	12 0.95	7 0.92	12 1.03	8 1.16	3 0.70	4 0.60	3 0.49	2 0.45	3 0.78	4 0.72
58500100 CRINFYNVDD											
26 31.0 0.84	5.1 2	20 0.98	1 1.22	2 0.92	3 1.19	*0 1.6	*0 0.9	*0 1.1	*0 0.0	*0 0.5	*0 0.9
57 69.9 0.82	7.9 7	17 1.04	3 0.53	12 1.18	5 0.72	4 0.92	5 0.74	4 0.65	1 0.24	1 0.25	5 0.91
58510100 HILL HOUSE DIN											
28 30.5 0.92	0.7 2	18 1.03	2 0.61	1 0.69	1 1.51	3 1.06	1 0.55	1 0.94	*0 0.2	1 1.03	*0 0.7
77 69.5 1.11	10.1 8	12 1.03	6 1.18	9 1.01	5 0.63	4 0.72	8 1.04	8 1.14	5 0.86	7 1.87	13 2.12
58520100 PEN-TWYN											
22 20.8 1.06	0.4 2	10 1.03	1 1.20	3 1.33	1 0.75	2 1.71	1 1.20	3 1.12	*0 0.5	1 0.86	*0 0.3
52 47.1 1.10	3.0 5	8 1.04	3 1.20	5 1.33	1 0.75	7 1.08	11 1.55	3 0.82	6 1.33	3 0.51	5 1.17
62420100 NINE WELLS											
21 29.0 0.72	3.0 3	9 0.90	5 0.69	1 0.43	1 0.77	1 0.34	2 1.00	*0 1.6	*0 0.6	*0 0.8	2 6.66
47 70.4 0.67	11.7 9	6 0.76	9 0.73	1 0.16	3 0.55	3 0.51	5 0.79	3 0.41	5 0.72	7 1.01	5 1.00
68400100 GASPER											
28 29.7 0.94	0.5 3	11 1.02	7 0.92	1 0.67	3 1.14	2 1.24	1 1.09	2 0.92	1 0.72	*0 0.4	*0 0.7
83 69.6 1.19	10.0 9	8 1.05	9 1.20	7 1.16	12 1.52	10 1.53	9 1.16	4 0.64	5 0.89	14 1.72	5 0.79
68410100 WOODLANDS MANO											
22 29.0 0.76	1.9 2	11 0.87	3 0.67	2 0.87	2 0.64	1 0.62	1 0.43	*0 0.8	1 1.66	*0 0.7	1 2.40
46 70.5 0.65	11.0 7	8 0.83	6 0.49	2 0.43	4 0.60	3 0.42	4 0.69	4 0.56	5 0.70	5 0.83	5 1.23
68440100 LYON'S GATE											
20 20.8 0.96	0.1 2	10 1.03	*0 0.8	1 0.44	2 1.50	2 1.71	*0 0.8	4 1.50	*0 0.5	1 0.86	*0 0.2
38 47.1 0.81	3.3 5	8 1.04	2 0.80	3 0.80	1 0.75	7 1.00	5 0.76	5 1.36	2 0.44	4 0.69	1 0.24
68450100 ALTON COMMON											
22 21.3 1.03	0.8 2	9 1.02	1 0.58	3 1.33	1 0.51	*0 0.6	1 1.14	3 1.06	2 2.52	2 1.61	*0 0.3
48 48.7 0.99	6.8 6	4 0.81	4 0.78	3 0.82	2 1.04	1 0.18	6 0.88	6 1.26	6 1.16	6 0.96	10 2.21
68470100 FARRINGTON											
26 30.2 0.86	1.5 3	14 1.04	4 1.14	*0 2.2	2 0.76	2 0.52	2 2.15	1 1.27	*0 1.1	1 0.87	*0 0.5
76 73.4 1.03	6.0 8	10 1.06	13 1.08	5 0.83	5 0.96	3 0.62	12 1.54	6 0.81	9 1.28	9 1.37	4 0.57
68480100 WOOLLAND											
23 20.9 1.10	6.2 2 *	8 0.82	1 1.20	1 0.44	1 0.75	1 0.85	1 1.19	6 2.22	2 3.88	1 0.85	1 3.26
63 47.4 1.33	14.7 5 *	6 0.78	2 0.80	2 0.54	1 0.75	8 1.33	11 1.45	7 1.91	7 1.55	6 1.02	13 2.87
68490100 OKEFORD FITZPA											
30 27.7 1.08	0.3 3	10 1.02	2 1.18	6 1.02	5 1.25	1 0.90	1 1.18	1 0.93	4 1.85	*0 0.7	*0 0.6
67 65.9 1.02	7.6 8	5 1.03	4 0.95	7 1.17	10 0.95	6 1.10	10 1.21	6 1.11	10 1.59	2 0.24	7 1.05
31570100 HOVINGHAM CARR											
35 31.5 1.11	0.6 3	13 1.04	3 1.22	5 1.35	2 1.01	5 1.00	4 1.30	1 1.56	*0 0.8	2 3.55	*0 0.8
87 77.5 1.12	17.8 8 *	13 1.07	3 1.17	8 1.17	9 1.14	7 0.85	13 1.70	14 2.11	8 1.05	11 1.01	1 0.14
31600100 LEVISHAM											
32 31.0 1.03	0.0 3	12 1.03	5 0.99	3 0.97	*0 0.6	5 1.29	2 0.85	2 1.15	1 1.88	2 1.48	*0 0.7
77 73.5 1.05	5.8 7	8 1.05	9 1.08	6 0.88	3 0.66	11 1.25	11 1.43	12 1.26	5 1.55	5 0.56	7 0.87
31620100 LASKILL											
30 32.1 0.93	0.4 2	15 0.96	3 1.20	4 1.07	2 0.79	4 0.93	1 2.16	*0 0.6	1 1.36	*0 1.1	*0 0.5
65 76.1 0.85	9.3 9	18 1.00	3 0.60	9 0.85	6 0.71	8 1.47	4 0.75	7 1.32	5 0.97	4 0.62	1 0.16
31630100 MENETHORPE											
29 29.8 0.97	0.6 2	11 1.02	4 1.18	2 1.32	4 0.88	4 1.05	2 1.10	*0 1.4	2 1.43	*0 0.3	*0 0.7
69 73.1 0.94	7.9 8	11 1.05	6 1.01	5 0.97	11 1.40	5 1.49	9 1.03	4 0.58	6 0.71	10 1.10	2 0.28
31660100 NUNNINGTON											
32 32.0 1.00	0.2 2	14 1.04	3 0.88	5 0.96	3 1.51	4 1.06	*0 0.9	*0 0.7	2 1.78	1 0.92	*0 0.3
77 76.4 1.01	4.9 7	14 1.00	9 1.17	10 1.13	10 1.40	5 1.33	8 0.88	4 0.84	7 1.26	7 0.78	3 0.46
58540100 KINGTON											
27 33.4 0.81	2.7 2	12 0.89	3 1.17	7 0.94	2 0.77	*0 2.3	2 1.47	*0 0.4	1 0.49	*0 0.8	*0 0.5
57 82.1 0.69	12.5 8	9 1.04	7 0.74	7 0.66	6 0.83	3 0.26	2 0.50	7 0.90	3 0.41	6 0.71	7 0.98
58550100 PEMBRIDGE											
30 34.0 0.88	1.3 3	12 1.02	7 0.93	3 0.68	3 0.95	2 1.15	1 0.55	1 0.93	*0 1.0	1 1.03	*0 0.5
73 82.8 0.88	5.7 9	12 1.05	4 0.59	10 1.03	11 1.00	6 1.00	11 1.27	4 0.69	4 0.52	6 0.63	5 0.80

CLASSIFICATION METHOD : TWINSpan ON SPECIES AND FAMILIES, 35 GROUPS

TOTALS			CHI SQ	90-100 80-89.9 70-79.9 60-69.9 50-59.9 40-49.9 30-39.9 20-29.9 10-19.9 0- 9.9																
OBS	EXP	O/E	DF	SIG	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E	OB	O/E
58560100 LEOMINSTER																				
36	33.2	1.08		0.9 3	14	1.02	2	0.79	6	0.99	2	1.07	6	1.52	4	1.49	*0	0.6	*0	0.5
75	82.0	0.91		4.3 8	14	1.05	3	0.69	9	0.92	5	0.63	5	0.64	11	1.21	7	1.27	9	1.01
58610100 COMBE																				
27	33.6	0.80		2.7 3	14	0.96	5	0.85	5	1.11	1	0.51	*0	1.1	1	0.56	1	0.61	*0	0.8
51	82.3	0.62		16.5 8 *	15	0.93	9	0.82	6	0.68	7	0.71	3	0.69	1	0.27	4	0.50	3	0.39
58640100 MORDIFORD																				
35	33.4	1.05		0.1 2	15	1.04	3	0.89	5	1.09	4	1.04	2	0.73	1	2.41	3	1.72	2	1.34
66	78.9	0.84		6.8 8	11	0.97	8	0.78	13	1.15	6	0.83	3	0.51	7	0.91	5	1.31	7	0.91
62580100 WENDY																				
34	31.9	1.07		0.4 3	13	1.04	3	1.16	7	1.17	4	1.50	*0	1.1	1	0.55	5	1.99	*0	1.0
71	79.3	0.90		7.9 8	8	1.05	9	1.17	7	1.03	11	1.11	3	0.61	5	0.66	11	0.96	9	1.19
62590100 HILDERSHAM																				
26	30.4	0.85		1.1 2	12	0.89	5	1.00	1	1.26	3	1.16	1	0.46	3	0.98	*0	1.2	*0	0.2
71	77.9	0.91		6.0 9	12	0.98	5	0.61	6	1.00	4	0.79	7	0.84	6	0.74	9	1.06	4	0.64
62610100 UPWARE LOCK																				
31	31.5	0.99		0.9 2	20	1.01	1	1.18	3	0.98	1	1.44	2	1.86	3	1.08	*0	1.0	*0	0.7
76	87.6	0.87		5.0 9	21	1.04	9	1.06	7	0.91	7	0.73	8	0.99	5	0.98	7	0.72	3	0.43
62640100 HARSTON																				
34	32.4	1.05		0.8 3	11	0.94	8	0.94	2	1.28	5	1.48	1	0.96	2	1.07	*0	1.1	4	2.39
82	80.6	1.02		6.0 8	10	1.05	10	0.98	8	1.33	11	1.06	10	1.40	5	1.24	13	1.19	6	0.79
62650100 HAUXTON MILL																				
31	32.8	0.94		0.4 3	14	0.97	6	0.87	3	1.35	3	1.55	1	0.45	1	1.06	*0	1.1	2	1.90
61	81.2	0.75		10.4 9	11	0.97	8	0.85	9	0.93	7	0.92	4	0.60	6	0.84	4	0.61	8	0.95
68560100 WALFORD MILL																				
32	36.0	0.89		0.8 3	15	0.96	6	1.00	2	0.66	3	0.92	3	0.90	2	1.42	1	0.58	*0	0.0
73	88.2	0.83		8.7 9	14	1.06	14	1.03	5	0.83	6	0.75	8	0.73	6	1.10	6	0.77	7	0.88
68570100 SYLES FARM																				
40	34.4	1.16		2.8 3	15	1.03	6	1.17	3	1.27	5	1.07	1	0.60	3	1.12	1	0.94	1	1.10
95	85.2	1.12		14.3 9	10	1.05	10	0.89	5	0.66	8	0.94	11	1.04	5	0.85	10	1.39	12	1.26
68580100 TRILL BRIDGE																				
34	33.6	1.01		0.1 3	15	0.96	7	1.17	1	0.67	4	1.53	2	0.73	1	0.72	1	0.98	3	2.38
66	83.0	0.80		12.4 9	12	0.91	9	0.81	7	0.92	10	1.30	8	1.32	3	0.45	6	0.74	7	0.88
68620100 BAGBER BRIDGE																				
39	34.8	1.12		4.7 3	15	0.90	6	1.01	2	0.90	2	1.44	4	1.18	1	1.06	5	2.06	1	2.10
99	85.7	1.16		45.9 8 ***	11	0.82	8	0.59	6	0.80	9	1.07	6	1.23	7	0.87	12	1.42	5	0.72
68630100 SPETISBURY																				
45	35.8	1.26		8.9 2 *	17	0.92	5	1.18	5	1.32	1	1.64	7	1.83	3	1.78	3	2.65	2	2.11
90	87.6	1.03		5.3 9	15	0.99	13	1.00	9	0.98	5	0.86	12	1.50	9	1.15	8	0.98	3	0.46
40010100 GARVA BRIDGE																				
20	23.7	0.84		1.3 2	11	0.95	2	0.57	1	0.69	*0	0.6	2	1.23	1	0.58	1	1.37	1	1.31
46	53.9	0.85		3.8 7	9	0.96	6	0.77	3	0.56	1	0.31	6	1.25	6	1.13	5	1.04	*0	2.4

